City of Seattle

Neighborhood Fire Station Financial Update

Fire Facilities and Emergency Response Levy Program

Fleets and Facilities Department
January 2006

Gregory J. Nickels
Mayor of Seattle

January 17, 2006

The Honorable Jan Drago
President, Seattle City Council
City Hall, 2nd Floor
Seattle WA 98104

Dear Council President Drago:

I am transmitting to the City Council a revised financial plan for neighborhood fire stations included in the Fire Facilities and Emergency Response Levy program.

As you know, we are making great progress – two new fire boats are being built, emergency supply caches and enhancing emergency water and power supply sources are in place or underway. All of these projects are close to completion and are within the estimated budget. We break ground for Fire Station 10 on Jan. 21, and the Joint Training Facility is nearly complete. Our focus now turns to the neighborhood stations – over the next seven years, we plan to renovate or rebuild 31 neighborhood fire stations.

In light of the dramatic and unanticipated rate of inflation of construction costs for both public- and private-sector projects over the past two years, we have updated the original cost estimates for the neighborhood fire station projects. The new estimates suggest it will require an additional $67 million to complete these projects.

In addition to the large inflation factor experienced by projects – public and private, a much smaller contributor to the overall increase are the original cost estimates. Although independent experts helped determine the original estimates, which were reviewed by council staff, councilmembers and my office, these figures turned out to be too low.

Despite these new financial challenges, I remain committed to the full program of neighborhood station improvements outlined in the Levy. This Levy is about public safety, the most basic service City government provides. Our current fire stations (average age 50 plus years) can not accomodate modern fire fighting equipment, do not meet the needs of our fire fighters and are not built to today's seismic standards. All of which are critical for our firefighters be able to respond if Seattle experiences a major earthquake. Without these improvements, they can't.

-over-

Included in this report is our plan to review and address the projected shortfall as part of each biennial budget process. I anticipate using a combination of Real Estate Excise Tax revenues, general government revenues and additional sources to fund the additional costs of the neighborhood stations program.

I look forward to working with you and the rest of the Council as we move forward to make the voters' vision a reality. Should you have questions regarding the attached financial analysis, please feel free to contact Brenda Bauer, Director, Fleets and Facilities Department.

Sincerely,

GREG NICKELS
Mayor of Seattle

Attachment

cc: Honorable Members of the Seattle City Council

Neighborhood Stations Program
Financial Update

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1 Executive Summary

A period of stability and modest cost escalation in the construction industry came to an end in 2004. This new construction environment has had a large impact on the expected cost of constructing the Fire Facilities and Emergency Response Levy Program approved by the voters in 2003. The increased construction costs of individual projects such as the Joint Training Facility and Fire Station #10 have already been addressed through legislation providing additional funds. The Fleets and Facilities Department hired a cost estimator to assess the financial impact of increased construction costs on the neighborhood fire station renovation and replacement portion of the Fire Levy that begins in 2006.

The cost estimating firm, Davis Langdon, found that the cost of renovating or replacing the 31 neighborhood fire stations in the Neighborhood Stations Program is about $32 million more, if bid in 2005, than planned in the Levy. Including likely future inflation, there may be a $67 million funding gap in the Levy program over the term of the program. Of this $67 million total, about $14 million is associated with an under-estimate of the costs of the station program during Levy planning.

The Department has thoroughly reviewed Davis Langdon's work, and corroborated it with contacts in the architectural and construction communities. These contacts confirm the Davis Langdon cost estimates, and also validate the importance of both individual station characteristics and future construction inflation as elements that will affect and determine total program costs.

The Mayor remains committed to completing the Neighborhood Station Program as described to the voters, and we recommend responding to these increased costs in two ways:

- Updating the Levy financial plan based on estimates provided by a private cost estimator as part of each biennial budget process. Estimates for the second year of each biennium would be reviewed during the mid-biennial budget process and adjusted as needed. This regular review allows the City to address additional funding needs within the context of the overall City budget process.

- Funding the additional costs of the Levy program through a combination of Real Estate Excise Tax revenues and general government revenues, and considering the use of Councilmanic debt to spread the additional costs more evenly over time.

This approach allows for flexibility in responding to changing construction conditions and any identified station design issues, while continuing the City's commitment to making Seattle the nation's most prepared city.

2 Approved Neighborhood Stations Program

The planning effort for the Mayor's proposed Fire Facilities and Emergency Response Levy began by focusing on the key objectives for updating and strengthening the City's emergency facilities:

- Modernize and seismically strengthen the City's fire and emergency response facilities.
- Build capacity and flexibility within the current fire system to address the continuing increased demand on the City's "First Responder" fire and emergency services to match Seattle's changing demographics and growing populations.
- Improve firefighter operations (including medic response, hazardous material response, apparatus support) and major emergency coordination/response.
- Enhance firefighter training.

These objectives were then translated into station-by-station facility upgrade recommendations through a station programming process. Oversight of this process was provided by a Fire Planning Client Group, including Mayor's Office Senior Staff, two City Councilmembers, Seattle Fire Chief, Finance Director, Fleets and Facilities Director and Seattle Fire labor representatives. The planning team consisted of local and national fire station and emergency operations design architects, seismic and structural consultants, a local cost estimator and City staff from Fleets and Facilities, Department of Finance, and Seattle Fire.[1]

The neighborhood stations plan[2] that resulted from this process includes:

- Building four replacement stations on new sites (not including Fire Station 10);
- Demolishing and replacing seven stations on their existing sites, with site expansion where necessary;
- Completely reconfiguring, expanding and remodeling five stations, including seismic upgrades;
- Partial remodeling, small additions and seismic upgrades in four stations; and,
- Seismic upgrades, minor remodels and small additions in 11 stations.

In general, stations built since the 1970's require only limited seismic and interior remodel work. Older stations require more extensive seismic reinforcement, remodeling and expansion to accommodate larger apparatus and emergency response demands. Projects were planned for all neighborhood stations except for Fire Station #5 on the central waterfront. Fire Station #5 also requires replacement, but the timing of this project is uncertain because of planning for Alaskan Way seawall and viaduct replacement.

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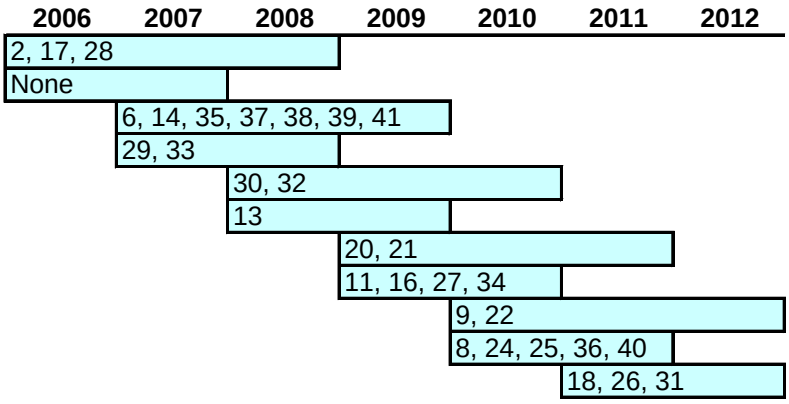
[1] For more information on the process and results of the original neighborhood stations planning, please see "Appendix A: Original Levy Planning Process."

[2] Fire Station #10 is not considered a neighborhood station in this paper because (i) it is co-located with the Fire Alarm Center and Emergency Operations Center; (ii) it was largely treated in a separate expenditure category in the Levy; (iii) it is underway; and, (iv) budget issues regarding Fire Station #10 were resolved in the summer of 2005.

The plan sequenced and prioritized neighborhood station projects to address more critical operational problems first and minimize disruption to Fire Department battalions:

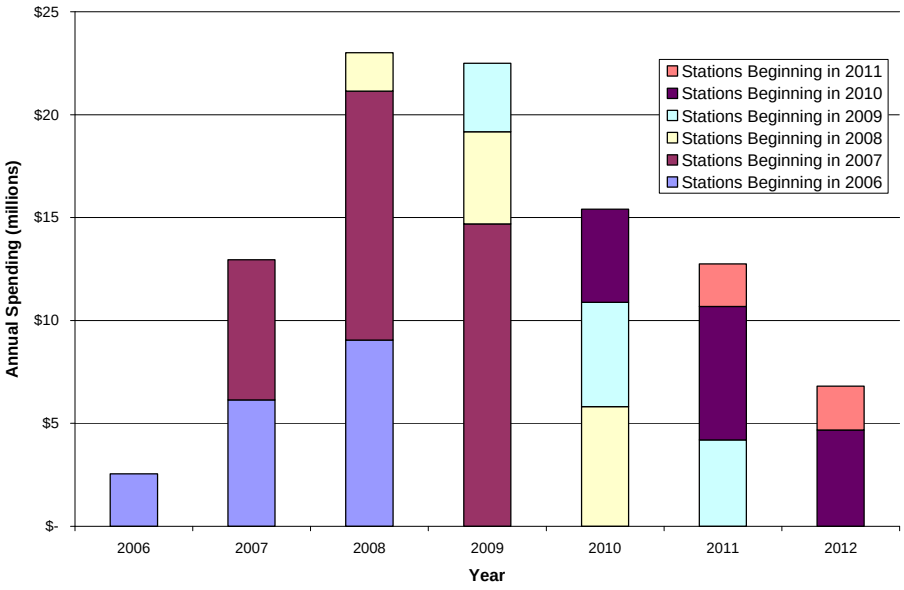
Approved Neighborhood Station Phasing Plan



The major and minor projects that begin each year are shown separately. Design and construction of major remodels and station replacements are expected to require three years. Minor remodel projects are expected to take two years. More of the major renovations and replacements were scheduled near the beginning of the program, and more of the minor renovations were scheduled near the end. This schedule completes the most important upgrades to the fire system early in the program.

Because the larger, more critical projects are scheduled near the beginning of the neighborhood station program, cash expenditures were also front-loaded in the program:

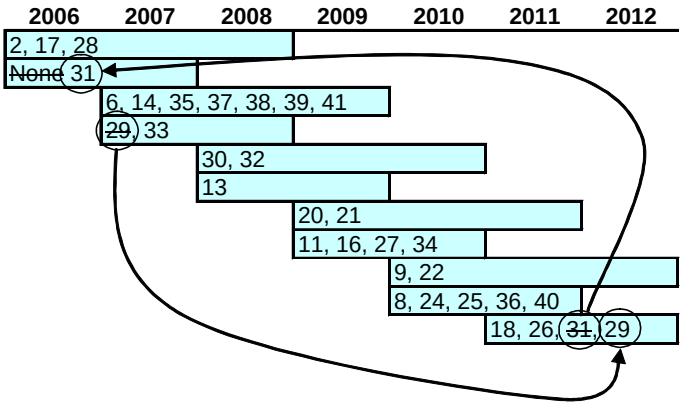
Approved Neighborhood Station Program Cash Flow



Under the approved plan, the highest levels of spending on the neighborhood stations program were associated with the stations that begin construction in 2006 and 2007. Expenditures of about $23 million a year were expected in 2008 and 2009.

Since the Levy was adopted, one change has been made to the project sequencing. The renovations of fire stations #29 and #31 have been swapped, so that Fire Station #31 is renovated earlier in the program:

Current Neighborhood Station Phasing Plan



Station #31 serves as the primary core station for the north end of the City and houses the north end attack unit ladder company. The station improvements add space for the hazardous materials unit to be located in a critical north end response area for the fire system early in the Fire Levy. Additionally, the improvements remodel the station for the necessary apparatus support, decontamination spaces and seismically upgrade the station.

Staff from the Fire Department and Fleets and Facilities reviewed the sequencing of the projects in 2005 as part of gearing up for the station renovation program. This review found that station phasing is still appropriate, and correctly accounted for the importance of each individual project and minimized operational impacts to the Fire Department.

3 Recent Construction Environment

Several changes in the design and construction environment have occurred since the Levy Plan was first proposed by the Executive:

- Construction costs have increased dramatically because of materials prices and the demand for contractors;
- More stringent code requirements have increased both design and construction costs for essential facilities; and,
- The construction costs associated with reaching LEED Silver certification have become clearer through experience.

These changes have caused an increase in the cost to construct the neighborhood station program.

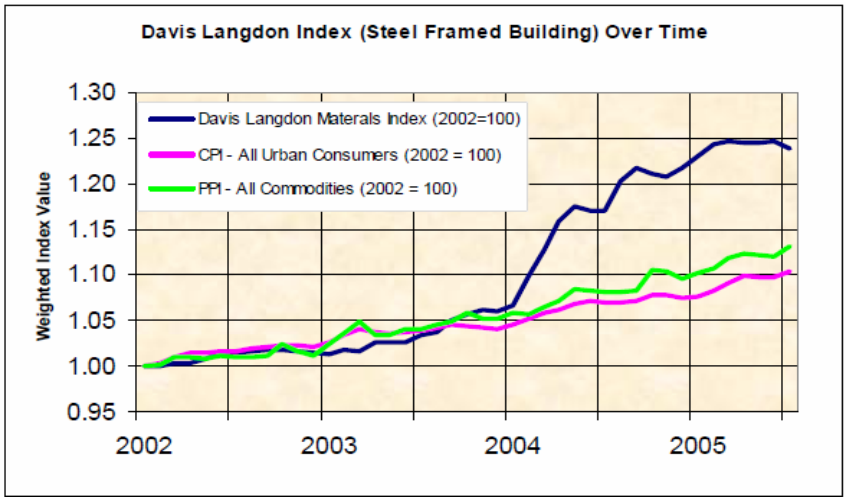
3.1 Increased Construction Costs

By the summer of 2004, increasing materials costs and increasing demand for contractors greatly increased the cost of construction above planning estimates. Many entities were impacted by these increased costs, and estimates of construction costs based on construction experience through 2003 proved to be dramatically low. Fleets and Facilities documented this increase across different project types as part of discussion of the Joint Training Facility budget:

Summer 2004 Survey of Construction Bid Experience

Project	Estimate	Bid Amount	Variance
Northgate Library and Community Center	7,302,067	9,285,000	27.2%
		9,538,000	
		9,700,000	
		Three other bids pulled	
Joint Training Facility	15,554,583	16,848,460	8.3%
		18,200,000	
		19,000,000	
Tillamook Forest Interpretive Center	4,804,195	6,260,526	30.3%
		6,633,000	
		Six other bids pulled	
Southwest Branch Library	3,366,008	4,310,000	28.0%
		five other bids	
WSU Academic Center	15,000,000	17,000,000	13.3%
CWU Exterior Masonry Restoration	450,000	600,000	33.3%
		Average Variance:	**23.4%**

The average variance between estimated project costs and bid results was 23%. The speed and scale of the increase in construction costs can be seen in an index of construction materials prepared by the cost estimating firm Davis Langdon:[3]



[3] See Appendix B: "Davis Langdon Cost Estimate Report", pages B-7 and B-8.

At the City's request, Davis Langdon estimated the percentage increase in construction costs experienced by owners from the May 2003 publication date of the Levy Operational Plan to September 2005. The Davis Langdon estimate captures both the increase in cost of construction inputs such as concrete and steel, and the risk, availability and profit premiums charged by builders. Davis Langdon found that, conservatively, costs have increased by 18% - 22% over this period. Construction input prices (labor and materials), risk of variation in construction input prices and contractor availability were all important factors in the increase in construction costs.

The demand for general contractors and sub-contractors has made the construction market less competitive and may allow contractors to increase the profit portion of their bids. Reduced contractor availability is demonstrated by example bid information provided by Hoffman Construction:[4]

> Let's look at some recent Hoffman projects to see the impact of the current market. The following outlines the number of mechanical and electrical bidders on large commercial projects:
>
> | | Date | # Mech Bids | #Elec Bids |
> |---|---|---|---|
> | 1. Bioengineering | Jan 2003 | 5 | 6 |
> | 2. Roosevelt HS | Aug 2004 | 4 | 5 |
> | 3. Everett WWTP | May 2005 | 2 | 3 |
> | 4. Skagit Hospital | Oct 2005 | 3 | 2 |
>
> You could conclude from the above that the market changed from Jan 2003 to Oct 2005. This is impacting all trades, not just the mechanical and electrical trades. Short of a major economical event with negative consequences, we do not see a change in current market conditions for some time to come.

The Davis Langdon report also concludes that significant cost increases can be expected to continue in the near- and mid-term. These costs apply to all the new construction and major renovation projects.

3.2 LEED Silver Certification

During Council review of the Mayor's levy proposal, the Mayor and Council agreed to target the "LEED Silver" level of certification if funds were available. The City asked the cost estimating firm Davis Langdon to estimate the cost of achieving LEED Silver in Seattle's urban environment, where site locations and footprints are determined by economics and fire department operational requirements. Davis Langdon estimates "that the premium cost for ensuring a LEED Silver certification should be in the range of $2.00 - $25.00/SF, with the most likely cost premium being $10.00/SF."

[4] See Appendix C: "Hoffman Construction Peer Review", page C-4.

3.3 More Stringent Seismic Requirements

The original levy program anticipated the code requirements of the then-current Uniform Building Code (UBC). In August 2004, Seattle implemented the International Building Code (IBC) as the code standard. The IBC and UBC treat seismic design for essential facilities such as fire stations differently. According to Davis Langdon:

> "The IBC made significant changes to the structural requirements for new fire stations. Among these changes was an increase in the importance factor, a measure of seismic performance, from 1.25 to 1.5. This change requires the buildings to have greater seismic resistance, both for the structural elements and the attached non-structural elements, so that there is a greater ability to function after an earthquake. In addition, other technical changes affected the way the earthquake forces are estimated and incorporated in the design, leading to higher initial design forces."[5]

The more stringent requirements of the IBC are expected to increase neighborhood station construction costs by $7.50 per square foot of new construction.

4 Current Cost Estimate for Neighborhood Station Program

Given the unsettled construction environment, the Executive hired a cost estimator, Davis Langdon, to re-estimate the cost of the neighborhood station program. Davis Langdon was the cost estimator engaged by the City to assist in negotiations of the Maximum Allowable Construction Cost on Fire Station #10. Davis Langdon was identified due to this recent experience with the unique characteristics of Fire facilities and the local market, because the work performed on the Fire Station #10 project was competent and instrumental in our project negotiations, and because their work is well respected in the industry.

4.1 Cost Estimate Methodology

In order to broaden Davis Langdon's understanding of our neighborhood stations program, we asked Langdon to perform station-specific review of eight stations. These stations include all the station projects that begin in 2006 (Stations 2, 17, 28, 31) and an additional four stations (6, 13, 33, 35) to characterize all the project types included in the neighborhood station program. Only high-level programming schematic drawings of station projects are available, so the cost estimates are not yet as specific as those associated with a final design.

Davis Langdon used the more intensive review of the eight stations to calibrate a higher level review of the neighborhood station program, with the goal of developing a middle-of-the-road estimate of the cost of the whole program. Davis Langdon was specifically instructed to calibrate the program-wide estimate as "middle-of-the-road," so that in their professional judgment, the chance that the program will cost more than the estimate is equal to the chance that the program will cost less than the estimate. It is expected that some projects will cost more than identified in the program-wide estimate, and that some projects will cost less, with the project-specific variances offsetting one another across the program.

[5] See Appendix B: "Davis Langdon Cost Estimate Report", page B-9.

As part of the approval process that placed the Fire Levy on the ballot, the City Council and the Mayor reduced the scope of the Neighborhood Stations Program. The Mayor's original proposal contained a number of "growth" apparatus bays to meet potential increased demand for emergency medical services (EMS). Demand for EMS is expected to grow as the City grows and as City demographics change. Before the Fire Levy was submitted for voter approval, these "growth" bays were eliminated from the Neighborhood Stations Program to reduce program costs. The project scope estimated by Davis Langdon does not include any items that were not in the financial package approved by the voters.

4.2 Cost Estimate Results

Davis Langdon estimates that the cost to build the neighborhood stations, as of September 2005, is $118 million, an increase of $32 million from the Levy Plan. This estimate is the expected cost of the program if construction bids were all received for all projects in September 2005.

Comparison of Levy Plan and Langdon Cost Estimate
(1000's of September 2005 dollars unless noted)

	Levy Plan (2004 $)	Planned Inflation to Sept '05	Total	Langdon Estimate	Difference	Percent Change from Plan
Temporary Relocation	$ 4,185	$ 222	$ 4,407	$ 4,407	$ -	0%
Site Preparation	1,711	91	1,802	6,244	4,442	247%
Site Development	8,436	448	8,884	4,123	(4,761)	-54%
Furniture, Fixtures and Equipment	5,978	317	6,295	6,871	576	9%
Indirect Construction Costs	28,447	1,511	29,957	41,493	11,536	39%
Construction Costs	32,997	1,752	34,749	55,218	20,469	59%
Total:	**$ 81,754**	**$ 4,341**	**$ 86,095**	**$ 118,356**	**$ 32,261**	**37%**

The total cost of the first four items, relocation, site preparation, site development and fixtures, furnishings and equipment (FF&E) is almost identical to the original Levy Plan.[6] There is some variance between site preparation and site development costs that likely represents slightly different and overlapping definitions of the costs.

The major cause of the change in program costs is change in the "bricks-and-mortar" cost of constructing fire stations. This higher bricks-and-mortar cost drives the increase in indirect construction costs such as permits, taxes and design services. Davis Langdon applies an indirect cost multiplier approach largely identical to the one used for the Levy Plan. Davis Langdon's approach is more specific than the one used for the Levy Plan, with the multiplier varying from 53% to 68% of expected construction costs depending upon the type of project. Overall, Davis Langdon's indirect costs are about 58% of construction costs, which is almost identical to the 60% figure used for the Levy Plan.

Most of the cost of the Neighborhood Stations Program is associated with constructing replacement stations or additions to existing stations. The cost of this new construction has increased substantially since the Levy was approved. The Levy Plan was based on an estimate of about $165 per square foot of new construction (2004 $). Davis Langdon's estimate of the cost of new construction as of September

[6] Davis Langdon was not asked to review temporary relocation costs. The Levy estimate of $4.4 million is assumed for both the Approved Levy Plan and the Davis Langdon estimates.

2005 is $270 - $300 per square foot, depending upon whether the construction is an addition ($300/ft^2) or a brand new building ($270/ft^2).

The cost of renovation projects has increased by about the same amount as new construction. The cost of constructing new stations and additions to old stations represents about 70% of the construction cost of both the Davis Langdon estimate and the original Levy Plan. This stability means that the cost of renovation and the cost of new construction have increased by about the same amount.

4.3 Cost Estimate Supporting Evidence

Fleets and Facilities has taken several steps to confirm the new construction cost estimates used by Davis Langdon. Estimators from Hoffman Construction familiar with Fire Station #10 and other fire station projects were asked to review the Davis Langdon estimates and methodology. Hoffman found that:

> "…it is clear to see that the cost per square foot can be a difficult thing to nail down on a generic basis – each facility has a uniqueness that impacts ultimate cost.
>
> However, the information tends to support the argument that new construction for fire stations is going to be in the $230/SF to $330/SF…We agree with your independent cost consultant's recommendation to proceed forward with the proposed square footage cost of $270/SF to $300/SF given this budgeting is at a programming level."

These estimates also appear reasonable in the context of the costs of recently occupied fire stations and fire stations now in design. The costs shown on the following page were provided to us by Ratcliff, an architectural firm specializing in fire station design.

Cost of Recent Fire Stations and Fire Stations in Design[7]

Project	Description	Completion Date or Status	Building Construction Costs	Building SF	Building Cost / Building SF	Building Code
OCCUPIED						
Ventura Fire Protection District Fire Communications Center	911 Communications Center	Occupied Fall 2005	$4,938,500	15,792 SF	$313	2001 CBC
Modesto Fire Station No. 11	Single Company Station	Occupied Spring 2005	$1,240,380	6,630 SF	$187	2001 CBC
Pleasanton Fire Station No. 4 (LEED Silver)	Single Company Station	Occupied Fall 2005	$2,148,750	7,545 SF	$285	2001 CBC
Fresno Fire Station No. 15	Two Company Station	Occupied Spring 2005	$2,277,500	9,150 SF	$249	2001 CBC
Fresno Fire Station No. 21	Two Company Station	Occupied Spring 2005	$2,277,500	9,150 SF	$249	2001 CBC
Talega OCFA Fire Station No. 59	Two Company Station	Occupied Spring 2005	$2,508,282	9,150 SF	$274	2001 CBC
City of Oakdale Fire Station No. 2	Single Company Station	Occupied Fall 2005	$1,333,000	5,916 SF	$225	2001 CBC
Geyserville FS	Volunteer Fire Station Hdqrs	Occupied Fall 2005	$3,040,250	12,500 SF	$243	2001 CBC
Mountain House Fire Station	HQ Sta. w/community room, EOC capability, & law enforcement	ON HOLD PENDING SCHEDULE	$2,236,090	8,557 SF	$261	1998 CBC
CONSTRUCTION DOCUMENTS AND BIDDING PHASE						
Turlock Fire Station	Two Company Station. Demo of Existing Station and Temp. Facilities	Construction Documents	$2,505,550	10,233 SF	$245	2001 CBC
Vernon Fire Station No. 2	Three Company Station	Construction Documents	$1,943,000	9,251 SF	$210	2001 CBC
POLB Fire Station No. 24	Two Company Station	Construction Documents	$1,850,000	6,264 SF	$295	2001 CBC
Bolinas Fire Station HQ	Volunteer Fire Station Hdqrs	Construction Documents	$2,760,000	9,000 SF	$307	2001 CBC
LA Fire Station No. 13 (LEED Certified)	Three Company Station	ON HOLD PENDING SCHEDULE	$5,200,000	15,290 SF	$340	2001 CBC
Murrietta FS No. 4	Two Company Station	Construction Documents	$2,956,506	9,073 SF	$326	2001 CBC
DESIGN PHASE						
Butte County Fire Station No. 2 (Budget numbers obsolete)	Two company shared facility with city of chico fire department	ON HOLD PENDING SCHEDULE	$2,791,899	14,840 SF	$188	2005 CBC
Stockton Fire Station No. 13 (Budget numbers obsolete)	Three Company Station w/community room, EOC	ON HOLD PENDING SCHEDULE	$3,863,000	16,673 SF	$232	2005 CBC
Riverside Downtown FS No. 1	Four Company Station	Design Development	$4,229,320	16,135 SF	$262	2005 CBC
Riverside Northside FS No. 6::	Two Company Station	Design Development	$2,131,060	8,093 SF	$263	2005 CBC
Riverside La Sierra FS No. 8	Two Company Station	Design Development	$2,465,000	8,093 SF	$305	2005 CBC
Riverside Canyon Springs FS No. 13	Two Company Station	Design Development	$2,365,000	8,093 SF	$292	2005 CBC
Riverside Training Center/EOC		Design Development	$3,635,590	11,179 SF	$325	2005 CBC
San Jose FS No. 34 ** (LEED Certified)	Two Company Station	Design Development			$325	2005 CBC
San Jose FS No. 35 ** (LEED Certified)	Batallion	Design Development			$325	2005 CBC
Fresno FS No. 16	Two Company Station	Design Development	$2,836,500	9,150 SF	$310	2005 CBC
Fresno FS No. 19	Two Company Station	Design Development	$2,836,500	9,150 SF	$310	2005 CBC

The construction of fire stations shown as occupied in 2005 would have been bid in 2003 or 2004, and costs would be higher were they bid today. This higher level of cost is demonstrated by the estimates shown for stations in late design and design development stages.

[7] Costs shown in this table include no adjustments for inflation. Projects shown are from California, which is the home of Ratcliff, the fire station design firm that provided them. Construction costs do vary along the west coast, with Seattle near the high end.

5 Impact of New Cost Estimates on Expected Levy Costs

The new cost estimates show that the cost of building the Neighborhood Station Program has increased since the Fire Levy was approved. The total increased cost is very sensitive to escalation in construction costs between now and when the last station is complete in 2012 or 2013. Davis Langdon expects construction costs to escalate well in excess of general economic inflation, and has provided a set of likely cost escalation scenarios. Under their "middle-of-the-road" cost escalation scenario, an additional $67 million would be required to build the Neighborhood Stations Program, compared to the approved Levy plan.

5.1 Cost Escalation Forecast

Construction costs have escalated by roughly 20% over the period from May 2003 to September 2005. This represents an average annual construction cost escalation of about 8% per year. The high rate of cost escalation largely began in mid-2004, and likely peaked at an average annual rate of about 13%.

Fleets and Facilities asked Davis Langdon to provide a range of likely cost escalation factors to apply to the Neighborhood Station Program. Their recommended escalation factors continue the recent high-inflation trend for the first two years, and then settle to a more moderate rate. However, this moderate rate is still somewhat higher than general inflation in the longer term:[8]

Davis Langdon Cost Escalation
July - June Annual Periods

Annual Period	Low	Midpoint	High
2005 – 2006	8%	10%	12%
2006 – 2007	6%	8%	10%
2007 – 2008	4%	6%	8%
2008 – 2009	4%	6%	8%
2009 – 2010	4%	6%	8%

Davis Langdon emphasized the expanding local economy in its discussion of these escalation factors, and believes that economic demand will offset the effect of likely increases in interest rates. The midpoint of these escalation factors is intended to represent the most likely "middle-of-the-road" case. Davis Langdon intends that the midpoint will underestimate construction escalation about half the time, and overestimate it about half the time.

The cost escalation factors recommended by Davis Langdon are substantially higher than those used in Levy planning, and add substantially to the cost of the Neighborhood Station Program. The $118 million cost of the neighborhood stations estimated by Davis Langdon as of September 2005 (including relocation costs) will grow to $163 million once inflation is included in each station project using Davis Langdon's cost escalation midpoint. Of this $45 million inflationary increase in cost, about $10 million was anticipated in the Levy plan, and the remaining $35 million is associated with the Davis Langdon construction cost and cost excalation estimates. This inflationary cost explains how the $32 million in

[8] See Appendix B: "Davis Langdon Cost Estimate Report", page B-10.

additional cost estimate by Davis Langdon as of September 2005 grows to $67 million over the life of the Neighborhood Stations Program.

5.2 Increased Levy Cost

The $67 million increase in construction-related costs creates a substantial gap in the Levy financial program. The Mayor's Implementation Plan was closely balanced, so that expenditures matched the combination of revenues from the property tax levy, Real Estate Excise Taxes, sale of decommissioned fire stations and grants:

Levy Financial Plan from the Mayor's Implementation Plan
($1000's)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Beginning Balance	(1)	(81)	(246)	(875)	(321)	1,211	1,923	1,081	143	
Levy Revenues	24,382	24,838	24,928	21,578	21,033	19,939	11,960	11,806	7,187	167,652
Other Planned Sources	5,539	7,250	4,410	2,600	4,091	3,236	2,564	-	-	29,690
Program Expenditures	(30,000)	(32,250)	(29,949)	(23,600)	(23,601)	(22,510)	(15,409)	(12,753)	(6,818)	(196,890)
Interest	(1)	(4)	(18)	(24)	10	47	42	9	(4)	57
Ending Balance	(81)	(246)	(875)	(321)	1,211	1,923	1,081	143	508	

Under the adopted plan, the Levy fund was intended to have a small positive cash balance by the end of the Levy program.

Since the original financial plan was developed, adjustments to the scope and budget of Levy projects that are underway have been made to assure that appropriations match known expenses. For example, $6 million was added to the budget of Fire Station #10 to pay for the costs of reinforcing the Yesler Way Viaduct, inflation and achieving a Silver LEED rating.

The additional costs estimated by Davis Langdon in the neighborhood station program create a $67 million gap in the Levy financial program. This gap is shown below as the "Additional Sources."

Financial Estimates with Revised Neighborhood Station Costs
($1000's)

	4Q '05	2006	2007	2008	2009	2010	2011	2012	2013	Total
Starting Balance	14,775	12,533	8,753	2,399	6,126	1,228	1,948	2,802	(0)	
Levy Revenues	12,500	25,000	21,000	21,000	19,900	11,750	11,750	6,800	-	129,700
Other Planned Sources	2,979	6,861	4,680	3,345	3,029	3,686	2,584	1,061	278	28,504
Additional Sources	**-**	**-**	**-**	**16,263**	**17,717**	**13,641**	**9,079**	**7,462**	**3,167**	**67,329**
Program Expenditures	(17,815)	(35,960)	(32,230)	(37,029)	(45,674)	(28,413)	(22,642)	(18,173)	(3,445)	(241,381)
Interest	94	319	195	149	129	56	83	49	(0)	1,074
Ending Balance	12,533	8,753	2,399	6,126	1,228	1,948	2,802	(0)	(0)	

This table shows that a portion of the $67 million in additional funding will be required no later than 2008, and the demand for additional resources will peak at about $18 million in 2009.[9] [10]

5.3 Breakdown of the Gap

About one quarter ($16 million) of the increased estimated cost of the Neighborhood Station Program appears to be caused by under-estimates and conscious choices during planning, and three quarters ($51 million) is caused by construction inflation and more stringent building construction requirements that could not be foreseen during Levy planning:

Breakdown of Additional Levy Estimated Cost
(1,000's of Dollars)

Variance in neighborhood station cost estimate	$	13,841	21%
No Allowance for Construction Inflation in 2003	$	2,327	3%
Cost Escalation in Excess of Levy Plan to September 2005 ($11.1 million) from September 2005 to the end of the Levy Program ($35.1 million)	$	46,164	69%
Additional Costs of Building to a LEED Silver Standard	$	3,375	5%
Move from UBC to IBC Seismic Requirements	$	1,622	2%
Total Additional Cost:	$	67,329	100%

The $51 million in costs that could not be foreseen during Levy planning include $46 million in inflation cost over and above inflation estimates of 3% per year. In addition, there is $3 million in costs of building to a higher LEED standard than originally proposed, and $2 million in costs associated with more stringent seismic requirements. These costs are described in more detail in Sections 3.1, 3.2, 3.3 and 5.1.

The $16 million in under-estimates is composed of $14 million from using a construction cost figure that was probably too low, and $2 million from not including an inflation adjustment for 2003. The $14 million may be a bias in the cost estimates developed by the consultants that was caused by including non-urban stations as construction cost comparables when the Levy cost estimates were developed. A per-square-foot estimate of about $165/ft^2 was used for new construction in Levy planning. This $165/ft^2 is lower than a number of urban stations in the list of comparable projects compiled as part of Levy planning, while many of the stations built in more suburban environments cost less than $165/ft^2.

[9] This financial plan includes positive year-end cash balances. These cash balances are levy tax revenues that are assigned to levy projects that don't yet need them. Levy tax revenues are assigned to individual levy projects by the voter-approved ordinance. This financing plan assumes that levy tax revenues assigned to one project are not available for use on another levy project.

[10] This financial plan includes about $0.6 million in additional costs to renovate the fireboat Chief Seattle. The impact of increased steel and specialized fire equipment costs on this renovation will not be known until design, and may be significant. Given the scale of the cost increases associated with the Neighborhood Station Program, it seemed prudent to assume that fireboat renovation costs have also increased. For this analysis, we have assumed fireboat renovation costs have increased on a scale similar to the Neighborhood Stations Program.

Fire Station Comparables from Levy Planning Process

Project Name	Building Size (Square Feet)	Area of Site (Square Feet)	Net Building Cost (Nominal Dollars)	Adjusted Cost per Square Foot (2003 Dollars)
North Kitsap County HQ Fire Station #81	19,500	unknown	1,800,000	112
Granite Falls Fire Station	5,200	unknown	500,000	118
Rainier Fire Hall & Community Center	19,000	unknown	2,000,000	124
Lewis County Fire Station	14,370	unknown	1,489,700	126
Woodinville Fire & Life Safety	20,470	103,048	2,517,755	139
Happy Valley Fire Station	10,400	unknown	1,197,600	141
Marysville Fire Station #62	12,063	81,207	1,518,664	142
Walla Walla Fire Station	8,960	unknown	1,036,442	147
Whatcom Co. Fire Station & Training Center	10,000	unknown	1,200,000	147
King County FD #45 HQ STA #66	13,695	21,707	1,863,123	148
Spokane Fire Station #81	12,500	unknown	1,500,000	154
Church Road Fire Station #6	10,082	unknown	1,278,960	154
Friday Harber Fire Station	10,000	unknown	1,226,703	158
Port Ludlow Fire Station	8,000	unknown	1,000,000	158
Geneva Fire Station	8,300	unknown	1,072,347	159
Edmonds Fire Station #16 2003	10,080	56,706	1,491,258	160
Tacoma Fire Station #8	11,000	unknown	1,500,000	161
La Center Fire Station #3	8,500	unknown	1,120,000	162
Lewiston Fire Station	6,200	unknown	716,412	163
Shoreline Fire Dept. North Facility	11,752	14,780	1,917,784	171
Marysville Fire Station	11,000	unknown	1,650,000	172
Shoreline Fire Dept. South Station	11,752	13,700	1,943,491	174
Camas Fire Station	11,800	unknown	1,597,000	174
Issaquah Highlands Fire Station	11,945	34,700	1,997,881	176
Maple Valley Fire Station #80	9,000	unknown	1,400,000	178
Mercer Island Fire Station #91 1999	11,830	36,380	1,974,415	188
Des Moines Fire Station	16,370	unknown	2,750,000	193
Shoreline Fire Dept. Training Facility	14,024	67,345	2,813,409	211
Bellingham Fire Station	8,700	unknown	1,600,000	226

There are several factors that make a fire station built in an urban environment cost more than one built in a suburban environment. First, more land is typically available in a less-built environment. More land allows a more sprawling building design that allows architects to adjust to property characteristics to minimize cost. Large properties are not available in Seattle, both because land is expensive and because of sensitivity to limit the use of eminent domain in acquiring fire station sites. Fire stations built on smaller sites are more expensive because they are multi-story, and site characteristics must be accommodated through physical construction and not careful placement of the building on the site. The second factor increasing urban fire station costs is personnel. Many less urban fire stations have only a limited permanent staff presence. Without permanent staffing, more expensive facility components such as kitchens and sleeping areas are avoided. Finally, building materials used in urban areas tend to be more durable, both because they withstand more use, and because they are more visually appealing.

5.4 Sensitivity Analysis

Several factors can affect the total size of the funding gap. The principal factors include construction inflation, the speed of executing the neighborhood stations program, and interest earnings in the Levy fund. Except for construction inflation, reasonable assumptions cause only small variation in the amount of additional funding needed to build the neighborhood station program.[11] Construction inflation could

[11] Appendix D: "Sensitivity Analysis" includes a detailed sensitivity analysis of different factors that affect the financing gap.

cause the amount of additional funding needed to vary substantially. If construction inflation is consistent with Davis Langdon's "Low" scenario (shown in Section x), only $53 million in additional funding will be needed (or $14 million less than the $67 million shown). If construction inflation occurs at the Davis Langdon "High" scenario, $83 million in additional fund will be needed (or $15 million more than shown).

Construction inflation can not be predicted with any certainty, so it is appropriate to regularly re-evaluate the financial status of the neighborhood station program in the light of actual cost experience on projects. Regular re-evaluation will avoid under- or over-appropriating funds toward the neighborhood stations program. Regular re-evaluation will also allow the City to take advantage of positive changes in general financial conditions to provide the additional sources needed by the neighborhood stations program.

6 Revised Financial Plan

The Mayor proposes to add additional City resources to cover the higher than expected costs of neighborhood fire facilities. The only alternative to this approach would be to reduce the scope of the Levy projects. The Mayor believes it is critical to construct all the planned projects because of the importance of these facilities to emergency response and the City's commitment to the voters when the Levy was approved. FFD and the Fire Department have reviewed the scope of each individual project and do not believe any significant cost reductions are possible. Bid alternates, such as additional bays for possible future growth, have already been eliminated, leaving little possibility for further savings.

The increased costs can be met from a combination of funding sources including Real Estate Excise Tax (REET) revenues and general government revenues and by considering use of debt financing to smooth out the pattern of additional costs. More than half of the increase in costs forecast for the program is associated with future cost escalation. In this environment, it makes sense to approach financing these increased costs on a biennial basis, with year-to-year adjustments. This approach allows the City to respond to the changing construction environment, and to develop the most well-informed financial plan in the context of its overall budget priorities.

6.1 Additional Sources of Funds

There are three primary strategies that could be used to provide the additional money needed by the Neighborhood Stations Program:

- Real Estate Excise Tax (REET) Revenues – REET revenues result from a tax on real property sales. REET revenues may be used for many general government capital purposes, such as the construction or rehabilitation of fire stations. An active real estate market has generated robust REET revenues in recent years. A little over $14 million in REET funding has already been planned or appropriated to Levy projects, of which $10 million has not yet been spent (and most has just been planned, and not yet appropriated). The City has other important uses for REET funding in addition to fire stations. For example, REET pays for much of the major maintenance on Parks facilities, and makes a significant contribution to transportation projects.

- General Government Tax Revenues – General government tax revenues come mainly from property taxes, sales taxes and business and occupation taxes. They can be used for any general government operating or capital purpose. They are the principal source of money for ongoing general government operations, such as public safety, human services, parks, and libraries.

- Councilmanic Debt – The City Council has authority to borrow a limited amount of money for general government purposes. Councilmanic debt is typically used to fund the acquisition of long-lived assets, such as new general government buildings and information systems. The City regularly issues Councilmanic debt, and a portion of one or more debt issues could be used to support the Neighborhood Stations Program. The neighborhood station improvements are expected to have a life of 20 years or more, so it is appropriate to consider spreading the costs of the program over time. Debt is not a source of funding but serves only to change the timing of expenditures. General government or REET revenues would be used to pay debt service (principal and interest) on any debt issued for neighborhood stations.

The Executive expects to use a mix of these strategies to support the Neighborhood Stations Program. The precise approach will be determined as part of each biennial budget process, with year-by-year review, in order to respond to changing construction conditions.

6.2 Financing Alternatives

Neighborhood Station Program costs will be re-estimated for each biennial budget starting with the 2007-2008 biennium. These costs will be based on the latest schedule for projects and updated cost estimates using current construction inflation forecasts. Revenues available from existing sources, including the Levy and existing commitments of REET, will be determined for each year. Any difference between the construction cost estimate and the available resources will be covered by additional City funds.

Depending on the amounts needed each year and the availability of revenues, the additional City funds may be in the form of cash or Councilmanic debt. The only significant sources of cash will be General Fund or REET. These would also be the sources available to pay debt service. The following table shows three example financing scenarios. Actual financing for each biennium will be determined as a part of the biennial budget process:

Example Financing Scenarios
(1,000's of Dollars)

	2007	2008	2009	2010	2011	2012	2013	Later Years	Total
Option 1: Cash from General Fund or REET	$ -	$ 16,263	$ 17,717	$ 13,641	$ 9,079	$ 7,462	$ 3,167		$ 67,329
Option 2: REET and Debt within Levy Term (*)	$ 5,000	$ 9,530	$ 9,530	$ 12,320	$ 12,320	$ 12,320	$ 12,320		$ 73,340
Option 3: REET and Longer-Term Debt (**)	$ 5,000	$ 8,050	$ 8,050	$ 9,380	$ 9,380	$ 9,380	$ 9,380	$ 20,180	$ 78,800

(*): assumes $5M REET commitment annually, $23M of 6-year debt @5% in 2008, and $10M of 4-year debt @4.5% in 2010.
(**): assumes $5M REET commitment annually, $23M of 10-year debt @5.5% in 2008, and $10M of 10-year debt @5.5% in 2010.

The current forecast of the financial gap in the Levy program (Option 1) shows a large demand for additional funds in 2008-2010, making it likely that one or more debt issues would be needed in this period. Option 2 and Option 3 show the impact on General Fund and REET revenues of using some debt as part of the Levy financial package. Under Option 2, all Neighborhood Station Program costs,

including debt service costs, are paid by the end of the station program in 2013. Under Option 3, these costs are spread over a longer period of time using 10-year debt (longer terms would also be possible). Option 2 and Option 3 both smooth the impact of the additional Levy costs on the City. In both cases, the City's total cost is higher because of interest payments on the debt.

The term and structure of the debt would be determined in each budget. Debt service could be structured to be level over a fixed period or could vary with estimated availability of funds. One key question is whether the term of the debt should be limited to the schedule for project construction, which ends in 2013. Doing so would result in larger payments during this period but less total interest. It would be acceptable to issue debt for longer terms because the fire station improvements will have useful lives of at least 20 years. This would lower costs in the near term but would require debt service to be paid farther into the future and at higher overall interest.

7 Revised Oversight Plan

The approach to oversight used so far for the Fire Facilities and Emergency Response Program has been sufficient to guide and develop the unique, one-of-a-kind projects that are underway, such as the Joint Training Facility, the new fireboats and Fire Station #10. Because these projects have been one-of-a-kind, they have not been good predictors of the scope and cost issues that may be associated with neighborhood stations.

Now that the Neighborhood Station Program is beginning, the City will have the opportunity to use current cost information to refine future cost estimates. In addition to existing oversight mechanisms, the Executive is recommending an annual report to the Public Safety Committee of the City Council incorporating a cost estimator's review, similar to this report.

7.1 Existing Oversight

Robust oversight mechanisms were built into the Fire Facilities and Emergency Response Program, including:

- City Council review and approval of all appropriations and changes to appropriations. By law, the City Council makes all appropriations of City funds, including Fire Levy Proceeds.
- Quarterly Levy Oversight Committee review of all Levy progress and spending.
- Quarterly Capital Improvement Program financial and status reports.
- Executive review of project progress.
- Monthly financial reporting to the Levy Oversight Committee, the Mayor's Office, the Department of Finance, the Fire Department and Council staff.
- Monthly meetings of the Fire Station #10/Joint Training Facility Client Group.
- Monthly meetings with Department of Finance analysts.
- Fleets and Facilities internal management oversight.

This oversight ranges from presentations with questions and answers to delivery of financial reports. The principal high-level mechanism for program-wide Levy oversight is the Levy Oversight Committee, including the following participants:

- Councilmembers:
  - Councilmember Jan Drago
  - Councilmember Nick Licata
- Executive Representatives:
  - John Franklin, Chief of Departmental Operations
  - Gregory Dean, Fire Chief
  - Dwight Dively, Finance Director
  - Brenda Bauer, Fleets and Facilities Director
  - Jordan Royer, Mayor's Senior Advisor for Public Safety
- Citizen Representative:
  - William Bradford, University of Washington professor
- Local 27 member:
  - Dallas Baker

This committee meets quarterly to discuss progress on the Levy program and review the status of each project. The committee also receives monthly project status and financial reports on each project.

7.2 Additions to Levy Oversight

The City should continue to expect an unsettled construction environment for at least the next several years. In this context, it makes sense to schedule a regular review of the Neighborhood Stations Program and program cost estimates in order to adapt to changes in the construction environment. The Executive recommends that:

- In April of each year in which a biennial budget is developed, the Levy Oversight Committee review a report on the Levy Financial Plan, including a report of a consultant cost estimator on the expected cost of upcoming Neighborhood Stations Program projects. The Levy Oversight Committee will be asked for their findings on the report, and make a recommendation for further action to the Mayor and City Council. This report takes advantage of the regularly scheduled meeting of the Levy Oversight Committee timed to review first quarter Levy progress.

- In May of each year, the Executive will brief the Public Safety Committee of the City Council on the report and the findings and recommendations of the Levy Oversight Committee. This report will include proposed legislation, if necessary, to adapt specific projects to a changing construction environment.

This timing coincides with the development of the Executive's proposed Capital Improvement Program. Reviewing the Levy and the Neighborhood Stations Program on this schedule will allow the Executive to incorporate the results of the oversight process into the annual Capital Improvement Plan. Reviewing the Levy projects outside of the budget process will allow more time for discussion and resolution of Levy issues.

Neighborhood Fire Station
Financial Update

Appendix A
Original Levy Planning Process

Fire Facilities and Emergency Response Levy Program

Appendix A – Original Levy Planning Process

The Mayor appointed Fleets and Facilities in the summer of 2002 to lead a Fire Facilities Planning Work Group. The purpose of the group was to guide the planning process and develop the necessary work that would assist the decision-making of the Fire Planning Client Group. The Client Group was comprised of Mayor's Office Senior Staff, two City Councilmembers, Seattle Fire Chief, Finance Director, Fleets and Facilities Director, and Seattle Fire labor representatives. The Committee's responsibility was to refine and finalize a fire facilities and emergency response program proposal.

A neighborhood station programming subgroup was formed to define the operational criteria, develop fire station prototypes (space components and station size) and provide station program budget estimates for the Fire Planning Work Group. The programming team consisted of local and national fire station and emergency operations design architects, seismic and structural consultants, a local cost estimator and City staff from Fleets and Facilities, Department of Finance, and Seattle Fire.

The programming group:

- Reviewed, updated and built upon the City's 2001 fire facilities condition assessment completed for all of the fire stations.
- Convened several working sessions with Seattle firefighters, Command Staff and others across the department to engage in discussions around the operational requirements firefighters viewed as critical in their ability to deliver the essential services.
- Performed site visits to all neighborhood fire stations to identify conditions and test the adaptability of existing facilities and sites to the station prototypes.

The work products of the programming group included:

1) Operational criteria which determined the essential types and sizes of spaces in a typical fire station prototype:
    a. Standardized a two-bay station minimum
    b. Apparatus bay size standard to house the largest apparatus (ladder)
    c. Support spaces (decontamination, bunker gear, apparatus storage space, security watch office, etc.) to support apparatus and operations
2) Schematic prototypes for each of the four station sizes
3) Station Concept Designs
4) Master implementation schedule which reflected the most critical of the projects being completed in the early years as it related to improving response, enhancing operational efficiencies and expanding system capacity.
5) Station Program Budget Estimates

Project prioritization to determine which projects would begin when revolved around five operational criteria:

1) Capacity to meet future growth of fire and emergency management services
2) Obsolescence
3) Response times and strategic locations of special services
4) Structural seismic deficiencies
5) Inefficient Operations

In addition, there are domino effects that link certain station projects. For example, the Fire Alarm Center and Emergency Operations Center must be moved from Station 2 before the Fire Station 2 major

renovation construction can begin; therefore, the Station 10 project must be scheduled in advance of the Station 2 work.

So, for the first three years of the Levy, projects were scheduled which added capacity to the fire system, strategically placed special operations around the City, and addressed obsolescence and major inefficient operations. Additionally, attention was given to the geographical location of the projects to ensure a balance of the number of stations in a given response area that would be in interim locations.

2006 Stations (FS2, FS17, FS28 and FS31)

Station 2 is experiencing significant increases in emergency medical response call volumes and the major renovation adds response capacity to this area. As determined in the 2003 Seattle Fire Department Strategic Operational Plan, the station serves a critical area of the city and is geographically situated to provide a broader deployment of resources which this area is expected to experience over the next few years. The renovated station will accommodate an additional Engine, EMS unit and Battalion Chief. This station must be complete before work on Station 25 is begun, because the Battalion Chief from Station 25 moves to 2's (to make room for an additional EMS unit at 25, another area of increasing call volumes).

Station 17 is another response area that needs critical capacity adjustments and also creates broader system capacity. The Station 17 renovation will allow for the newer, larger apparatus to serve the area, house the north end rescue unit and accept the medic unit from Station 16, which must move in order to accommodate the necessary program additions at Station 16.

Station 28 serves another growing call volume area. It also needs modification to house larger apparatus. The project will add critical capacity to house the USAR and MMRS semi trucks (currently stored in a liquefaction zone, outdoors).

Station 31 is a seismic and life safety remodel with a minor addition. The project will build critical strategic operational capacity in the Station to accommodate the North End Hazardous Materials Unit. The interior remodel will address serious interior conditions that create significant inefficiencies in the fire fighter operations at the station.

Neighborhood Fire Station
Financial Update

Appendix B
Davis Langdon Cost Estimate Report

Fire Facilities and Emergency Response Levy Program

PROGRAM BUDGET REVIEW

for

2003 Fire Station Levy Review
Seattle, Washington

DAVIS LANGDON

December 2005

PROGRAM BUDGET REVIEW

for

2003 Fire Station Levy Review
Seattle, Washington

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2003 Fire Station Levy Review
Seattle, Washington

Program Budget Overview
December 2005
0278-7403-110

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Program Estimates for Selected Fire Stations	Separate Cover

Fire Station No 2 - Battalion II
Fire Station No 6 - Battalion V
Fire Station No 13 - Battalion V
Fire Station No 17 - Battalion VI
Fire Station No 28 - Battalion V
Fire Station No 31 - Battalion VI
Fire Station No 33 - Battalion V
Fire Station No 35 - Battalion IV

2003 Fire Station Levy Review **Program Budget Overview**
Seattle, Washington **December 2005**
0278-7403-110

Summary

Davis Langdon was asked by the City to estimate the cost of the neighborhood station component of the City's Fire Facilities and Emergency Response Program. Our estimate is based on the program documented in the Seattle Fire Stations Operational Plan, dated May 5, 2003, as modified by the Summary of Key Decisions on Fire Levy Facilities. These Key Decisions deleted proposed new program space largely associated with expected future growth in demand for emergency fire and medical services at Fire Stations 6, 14, 17, 31, and 32. In addition, Fire Stations 5 and 10 are not included in the program for the purposes of our work.

Our recommended budget for the neighborhood stations program (as adjusted) is $114 million as of a construction bid date of September 2005. This $114 million includes our estimates of the cost of design, construction, permits and project management, but not the cost of temporary relocation of Fire Department staff where required.

We were also asked to provide information on project costs associated with LEED Silver certification, recent changes in building code, recent dramatic escalation in construction costs and expected future construction cost escalation. Our conclusions and recommendations on these subjects appear under separate headings in the body of this report. LEED, building-code related costs and construction cost escalation through September 2005 are all are incorporated into our $114 million program cost estimate.

Budget Methodology

In producing the estimates we developed budget estimates for eight of the programmed fire stations, those being Stations 2, 6, 13, 17, 28, 31, 33 and 35, and reviewed our historic cost data for comparable facilities. These stations were chosen to (i) provide tighter estimates for station projects beginning in 2006; and, (ii) provide representative examples of the different project types in the Levy program. The eight station-specific cost estimates were used to refine and validate the higher-level cost estimates used for the program as a whole. Site budgets are based on typical site costs for comparable facilities, and include costs for site preparation and clearance, and for site development.

For the budgets for the eight stations we looked at individually, we broke the expected project scope down based on the information provided by the Operational Plan. We then used comparable projects and our professional judgment to estimate the costs of each of the project components, such as foundations, vertical structure and exterior cladding. We then totaled the cost of these project components to calculate the per-square-foot cost of the project for use calibrating the program-wide cost estimates.

For the program-wide cost estimates, we categorized the station projects based on the type of construction work planned. Work was categorized into new construction and minor, moderate or major renovation. We then applied a different per-square-foot construction cost to each type of work. These per-square-foot estimates are based on our experience with similar projects and the eight station-specific budgets we prepared. To validate the new construction cost estimates we used for this analysis, we spoke with peers in the California area.

It is important to note that the costs for the buildings and the sites are based on typical costs, which do not reflect site specific needs or conditions. It is likely therefore that costs at individual stations will vary from the stated line item budgets, with some stations costing more, others costing less. The line item budgeting was undertaken as a process to establish a reasonable cost for the overall program, not site specific budgets.

The proposed budgets reflect the City requirement for all new and substantially remodeled facilities to achieve a LEED silver rating. Facilities that are to receive only a seismic and life safety upgrade do not need to meet this standard, but all new work will conform to sustainable guidelines. The budgets cover the least cost options for achieving the certification, and do not reflect any other specific sustainability goals, such as a percentage of power derived from renewable sources, exceeding energy codes by prescribed amounts, etc.

Building and site demolition costs are included under site preparation costs for new construction only. For new buildings on existing sites, the demolition cost covers the cost to remove the existing fire station and clear the site. For new buildings on new sites, the demolition cost covers the cost to remove any existing structures on the new site. Demolition is not included for existing sites that are to be sold, since we understand that the sale will include land and buildings ‘as is’.

The budgets include allowances for abating hazardous materials in the existing buildings only to the extent that they impact on the areas of work. Any such materials outside the area of work will remain in their current state. The demolition budgets for newly acquired properties include an allowance for abating likely hazardous materials in the acquired buildings. Abatement budgets are based on the expectation of the presence of moderate quantities of asbestos containing materials in flooring, insulation and wall and ceiling finishes, hydrocarbon soot in apparatus bays, mercury and PCB’s in lights and transformers, and lead based paint on woods and metals. The abatement work will occur in vacated buildings, and include encapsulation as an option where appropriate. The budgets do not cover any fuel storage tanks which may be present in the sites.

Site development costs cover costs for site finishes, including vehicular and pedestrian paving, landscaping, site structures, lighting and drainage. For the seismic and life safety projects, the site development budgets are limited to minor site improvements. For the

major renovations and new construction, site development for all finished site areas has been included.

Furnishings, Fixtures and Equipment (FF&E) budgets are based on the budgets developed for the May 5, 2003 program, escalated to current costs. We have not reviewed or repriced these items.

Soft costs include the following owner related costs:

- Washington State Sales Tax at 8.8% of all costs. City Business and operation taxes are included in the base construction cost.
- Construction Period Contingency at 15% for seismic and life safety work, 12% for major renovation and 10% new construction. This is to cover added cost arising from unforeseen site conditions or plan coordination after award of the construction contract. The contingency for design period changes is included in the base construction cost
- Permit & Plan Check at 2%
- Printing & Bidding at 1%
- Design Services & Consultants at 20% for seismic and life safety work, 15% for renovation and 12% for new construction.
- Design Commission at .3%
- Commissioning & QC at 1% for seismic and life safety projects and 3% for renovation and new construction. The reduced amount for the seismic projects reflects the limited scope requiring commissioning.
- Project Management at 9% for seismic and life safety projects, 8% for renovation and 5% for new construction.
- Management Reserve at 5.4%. This is to provide a program wide contingency for changes in program or site requirements, or in general market conditions throughout the duration of the program.
- Test & Inspection at 4% seismic and life safety projects, 3% for renovation and 2% for new construction 1.6%
- Public Art at 1.6% of direct cost, which is equivalent to 1% of the total project budget
- Move & Closeout at .5% for seismic and life safety projects, 1 – 1.3% for renovation and 2% for new construction.

The budgets exclude the following:

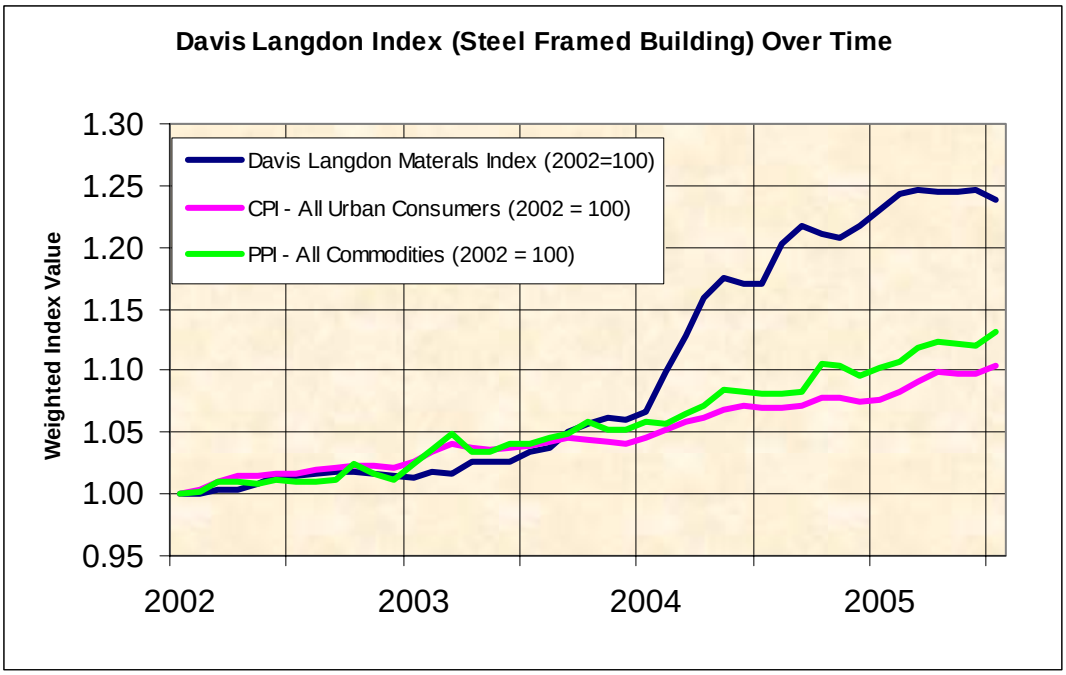
- Land acquisition
- Legal and financing costs
- Costs associated with compression of schedule, premium or shift work, and restrictions on the contractor's working hours
- Costs associated with hazardous material abatement or archaeological exploration, other than the work described above
- Assessments, taxes, finance, legal and development charges, including utility connection charges

- Environmental impact mitigation which may be required off site.
- Predesign, Planning & Programming work
- Cost escalation beyond the date of the report (September 2005)

Cost Escalation

The past two years have seen very high construction cost escalation, particularly on the west coast. We have estimated the increase in construction costs by re-pricing projects bid in 2005 with component-level costs of projects bid in the summer of 2003. This detailed bid review shows that costs in the Seattle area have increased by 18 – 22% since the May 5, 2005 "Seattle Fire Stations Operation Plan" document was published. This estimate is somewhat conservative.

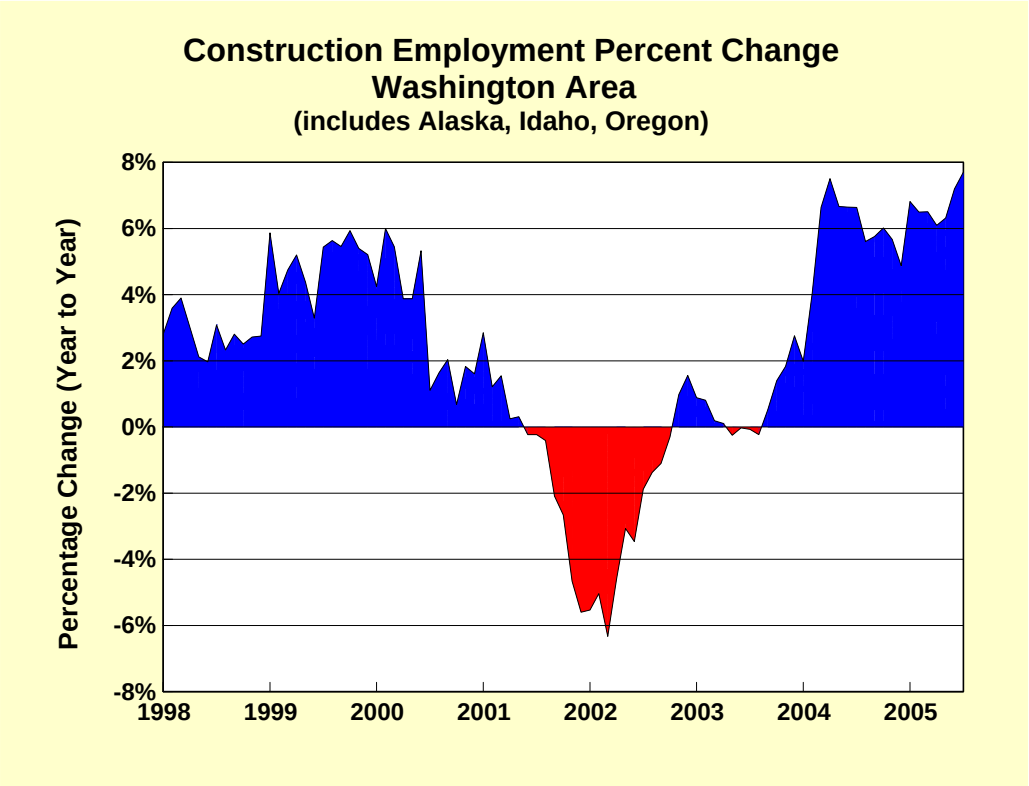
The cost rise is largely demand driven. In the first instance there has been a strong demand for construction services nationally, and even globally, which has led to cost pressure on many strategic materials such as steel, concrete, copper and wood. This has translated into a materials cost increase of roughly 20% in the past two years, as can be seen from the chart below, which tracks the Consumer and Produce Price indexes, and a construction specific, national materials cost index compiled by Davis Langdon.



Of particular concern was the speed and breadth of the increase. The scale of the change was truly unprecedented, and left many contractors severely exposed to cost liabilities that were completely unforeseen. As a result, many contractors have become very wary of similar future price shocks, and are increasing the risk premiums in their bids in an

attempt to cover future risks, and to some degree, recapture prior losses. This has translated to marked increases in bids.

In addition to the broad based increase in material costs, construction demand in the Pacific Northwest has been growing strongly, with sustained annualized growth rates in the range of 6% per annum, after a fairly lengthy period of contraction and low growth. As a result, the market has been experiencing a high level of price stress, with low levels of bidder availability. When competition is constrained by high demand growth, bidders are able to command higher bid premiums.



Since much of the cost escalation is a market response by bidders, as opposed to simple changes in input costs of materials and labor, most published indexes fail to measure the cost rise adequately. These published indexes are based on a very narrow basket of goods, and typically exclude any measure of contractor overhead and profit, either at the general or the subcontractor level. In order to document the changes it is necessary to compare total bid pricing across a range of projects by re-pricing recently bid projects with comprehensive pricing from previously bid projects.

LEED Silver Costing

The requirement to achieve a LEED silver certification has a small but noticeable cost impact for fire stations. Silver certification requires a minimum of 33 LEED points, which means that in practice the design should aim for a minimum of 36 – 38 points, since it is not uncommon to miss some points during the design or construction process.

From an analysis of the sustainable features which could be incorporated, we find that a typical fire station, in Seattle, should be able to achieve on average 22 points with careful strategic thought, but no significant cost impact. Not all stations will be able to reach this number, but a minimum of 18 should be achievable. A further 11 points should normally be available for a minor cost premium; minor being a cost in the range of $2,000 - $5,000 premium per point. For a typical station this would translate to $2.00 - $4.00/SF. Additional points come at increasing difficulty, and at increasing cost. There are 17 points to choose from in this category, and assuming that the project will need from 2 – 6 of these points, the premium could be in the range of $5.00 - $20.00/SF.

We would therefore estimate that the premium cost for ensuring a LEED silver certification should be in the range of $2.00 - $25.00/SF, with the most likely cost premium being $10.00/SF. This allowance has been included in the base estimates.

Code Changes

The current Washington State building codes are based on the 2003 International Building Code (IBC). At the time of the initial study, the governing code was substantially based on the earlier Uniform Building Code. The IBC made significant changes to the structural requirements for new fire stations. Among these changes was an increase in the importance factor, a measure of seismic performance, from 1.25 to 1.5. This change requires the buildings to have greater seismic resistance, both for the structural elements and the attached non-structural elements, so that there is a greater ability to function after an earthquake. In addition, other technical changes affected the way the earthquake forces are estimated and incorporated in the design, leading to higher initial design forces. Combined these changes have a significant influence on the cost of the fire stations. We estimate that the increased seismic performance requirements have increased the cost of fire stations overall by $5.00 to $10.00/SF

The estimates in our study include the added cost of the current costs for new stations only. The work to improve existing stations' seismic performance is intended to provide for life safety and safe egress for personnel and equipment following an earthquake. The buildings may not be able to remain operational without further repair.

Future Escalation

Based on our evaluation of market trends in the Seattle area, we expect that construction escalation will continue to be a significant factor in the short term (1 – 2 years). The current strong demand for construction shows little sign of abating. Increasing interest rates will tend to diminish demand for construction as construction capital availability is reduced. The rise, however, is likely to be slow enough that the effect will be offset by the continued strength in the overall economy. In the absence of any dramatic inflationary pressures in other sectors which might lead to a sharper change in interest rates, we expect economic strength to be the dominant force.

In the longer term (3 – 5 years), we anticipate that economic strength will remain the dominant factor, but with diminished force as the market adjusts to the continued strength. There are several deflationary possibilities on the horizon, including more major natural disasters, significant illness outbreaks, or international instability, any of which alone, or in combination, could disrupt the economy sufficiently to create deflationary pressure. Nevertheless, we would anticipate continued moderate to strong construction cost escalation to continue over the coming five years.

We are therefore recommending the following escalation factors for projects in the Seattle area:

2005 – 2006	8% – 12%
2006 – 2007	6% – 10%
2007 – 2008	4% - 8%
2008 – 2009	4% - 8%
2009 – 2010	4% - 8%

The factors are additive (ie. the “best case” escalation is about 14% through July 2007), and based July to July.

Fire Station	Building						Site			
	Projected Work	GSF					Proposed Site	Projected Finish	Area	
		Renovation			New	**Total**			Gross	Finished
		Minor	Moderate	Major						
2	Major			34,216		**34,216**	Existing	Minor	18,690	5,000
6	New				11,763	**11,763**	New	Major	19,603	11,915
8	Moderate		4,839		1,310	**6,149**	Existing	Moderate	42,000	6,000
9	New				8,178	**8,178**	Existing	Major	11,760	5,794
11	Moderate	5,754			505	**6,259**	Existing	Minor	12,195	6,441
13	Minor	5,020				**5,020**	Existing	Minor	14,439	9,419
14	Major			14,040	2,574	**16,614**	Existing	Moderate	35,106	18,492
16	Moderate		5,000			**5,000**	Existing	Minor	7,441	2,441
17	Major			14,000	6,815	**20,815**	Expanded	Minor	24,000	12,000
18	Minor	21,000				**21,000**	Existing	Minor	19,982	9,900
20	New				8,434	**8,434**	New	Major	15,000	6,566
21	New				8,178	**8,178**	Expanded	Major	11,330	4,954
22	New				8,178	**8,178**	Existing	Major	11,218	4,842
24	Minor	4,680			290	**4,970**	Existing	Minor	15,640	10,670
25	Minor	18,000			560	**18,560**	Existing	Minor	23,076	8,000
26	Minor	5,900				**5,900**	Existing	Minor	17,957	12,057
27	Minor	5,960				**5,960**	Existing	Minor	44,248	38,288
28	Major			9,030	3,872	**12,902**	Existing	Minor	82,605	69,703
28	Storage				5,400	**5,400**	Included with station 28			
29	Minor	5,754				**5,754**	Existing	Minor	11,128	5,374
30	New				8,178	**8,178**	Expanded	Major	19,114	10,936
31	Moderate		11,200		1,208	**12,408**	Existing	Minor	18,000	5,592
32	New				18,722	**18,722**	Expanded	Moderate	18,160	7,489
33	Minor	4,300			1,209	**5,509**	Existing	Minor	28,252	22,743
34	Minor	3,300			1,113	**4,413**	Existing	Minor	12,334	7,921
35	New				9,384	**9,384**	Existing	Major	9,958	3,618
36	Minor	4,800			505	**5,305**	Existing	Minor	14,855	9,550
37	New				8,178	**8,178**	New	Major	15,000	9,034
38	New				8,178	**8,178**	New	Major	15,000	9,034
39	New				10,440	**10,440**	Existing	Major	33,652	23,212
40	Minor	6,100				**6,100**	Existing	Minor	14,382	8,282
41	Major			4,500	1,960	**6,460**	Existing	Minor	10,224	3,764
Total		90,568	21,039	75,786	135,132	**322,525**			646,349	

Fire Station	Building Costs						
	Renovation Costs			New Construction			**Total**
	Area	Rate	Total	Area	Rate	Total	
2	34,216 SF	180.00	$6,158,880				**$6,158,880**
6				11,763 SF	270.00	$3,176,010	**$3,176,010**
8	4,839 SF	60.00	$290,340	1,310 SF	300.00	$393,000	**$683,340**
9				8,178 SF	270.00	$2,208,060	**$2,208,060**
11	5,754 SF	60.00	$345,240	505 SF	300.00	$151,500	**$496,740**
13	5,020 SF	40.00	$200,800				**$200,800**
14	14,040 SF	180.00	$2,527,200	2,574 SF	300.00	$772,200	**$3,299,400**
16	5,000 SF	60.00	$300,000				**$300,000**
17	14,000 SF	180.00	$2,520,000	6,815 SF	300.00	$2,044,500	**$4,564,500**
18	21,000 SF	40.00	$840,000				**$840,000**
20				8,434 SF	270.00	$2,277,180	**$2,277,180**
21				8,178 SF	270.00	$2,208,060	**$2,208,060**
22				8,178 SF	270.00	$2,208,060	**$2,208,060**
24	4,680 SF	40.00	$187,200	290 SF	300.00	$87,000	**$274,200**
25	18,000 SF	40.00	$720,000	560 SF	300.00	$168,000	**$888,000**
26	5,900 SF	40.00	$236,000				**$236,000**
27	5,960 SF	40.00	$238,400				**$238,400**
28	9,030 SF	180.00	$1,625,400	3,872 SF	300.00	$1,161,600	**$2,787,000**
28				5,400 SF	165.00	$891,000	**$891,000**
29	5,754 SF	40.00	$230,160				**$230,160**
30				8,178 SF	270.00	$2,208,060	**$2,208,060**
31	11,200 SF	60.00	$672,000	1,208 SF	300.00	$362,400	**$1,034,400**
32				18,722 SF	270.00	$5,054,940	**$5,054,940**
33	4,300 SF	40.00	$172,000	1,209 SF	300.00	$362,700	**$534,700**
34	3,300 SF	40.00	$132,000	1,113 SF	300.00	$333,900	**$465,900**
35				9,384 SF	270.00	$2,533,680	**$2,533,680**
36	4,800 SF	40.00	$192,000	505 SF	300.00	$151,500	**$343,500**
37				8,178 SF	270.00	$2,208,060	**$2,208,060**
38				8,178 SF	270.00	$2,208,060	**$2,208,060**
39				10,440 SF	270.00	$2,818,800	**$2,818,800**
40	6,100 SF	40.00	$244,000				**$244,000**
41	4,500 SF	180.00	$810,000	1,960 SF	300.00	$588,000	**$1,398,000**
Total			$18,641,620			$36,576,270	**$55,217,890**

Fire Station	Site Specific Costs							
	Site Clearance/Preparation at new construction				Site Development			
	Site	Area	Rate	**Total**		Area	Rate	**Total**
2					Minor	5,000 SF	5.00	**$25,000**
6	New	19,603 SF	30.00	**$588,090**	Major	11,915 SF	25.00	**$297,875**
8					Moderate	6,000 SF	20.00	**$120,000**
9	Existing	11,760 SF	20.00	**$235,200**	Major	5,794 SF	25.00	**$144,850**
11					Minor	6,441 SF	5.00	**$32,205**
13					Minor	9,419 SF	5.00	**$47,095**
14					Moderate	18,492 SF	20.00	**$369,840**
16					Minor	2,441 SF	5.00	**$12,205**
17	Expanded	10,000 SF	35.00	**$350,000**	Minor	12,000 SF	5.00	**$60,000**
18					Minor	9,900 SF	5.00	**$49,500**
20	New	15,000 SF	30.00	**$450,000**	Major	6,566 SF	25.00	**$164,150**
21	Expanded	11,330 SF	20.00	**$226,600**	Major	4,954 SF	25.00	**$123,850**
22	Existing	11,218 SF	20.00	**$224,360**	Major	4,842 SF	25.00	**$121,050**
24					Minor	10,670 SF	5.00	**$53,350**
25					Minor	8,000 SF	5.00	**$40,000**
26					Minor	12,057 SF	5.00	**$60,285**
27					Minor	38,288 SF	5.00	**$191,440**
28	Existing	82,605 SF	20.00	**$1,652,100**	Minor	69,703 SF	5.00	**$348,515**
28								
29					Minor	5,374 SF	5.00	**$26,870**
30	Expanded	19,114 SF	20.00	**$382,280**	Major	10,936 SF	25.00	**$273,400**
31					Minor	5,592 SF	5.00	**$27,960**
32	Expanded	18,160 SF	20.00	**$363,200**	Moderate	7,489 SF	20.00	**$149,780**
33					Minor	22,743 SF	5.00	**$113,715**
34					Minor	7,921 SF	5.00	**$39,605**
35	Existing	9,958 SF	20.00	**$199,160**	Major	3,618 SF	25.00	**$90,450**
36					Minor	9,550 SF	5.00	**$47,750**
37	New	15,000 SF	30.00	**$450,000**	Major	9,034 SF	25.00	**$225,850**
38	New	15,000 SF	30.00	**$450,000**	Major	9,034 SF	25.00	**$225,850**
39	Existing	33,652 SF	20.00	**$673,040**	Major	23,212 SF	25.00	**$580,300**
40					Minor	8,282 SF	5.00	**$41,410**
41					Minor	3,764 SF	5.00	**$18,820**
Total				**$6,244,030**				**$4,122,970**

2003 Fire Station Levy Review
Seattle, Washington

Program Budget Overview
December 2005
0278-7403-110

Fire Station	Other Costs		
	FF&E		
	2003 Budget	Escalation	**2005 Budget**
2	$757,278	15%	**$870,870**
6	$308,125	15%	**$354,344**
8	$38,259	15%	**$43,998**
9	$235,525	15%	**$270,854**
11	$72,225	15%	**$83,059**
13	$46,092	15%	**$53,006**
14	$368,750	15%	**$424,063**
16	$78,765	15%	**$90,580**
17	$279,147	15%	**$321,019**
18	$154,774	15%	**$177,990**
20	$235,525	15%	**$270,854**
21	$235,525	15%	**$270,854**
22	$235,525	15%	**$270,854**
24	$74,188	15%	**$85,316**
25	$93,748	15%	**$107,810**
26	$38,747	15%	**$44,559**
27	$44,134	15%	**$50,754**
28	$368,750	15%	**$424,063**
28			
29	$79,927	15%	**$91,916**
30	$235,525	15%	**$270,854**
31	$126,941	15%	**$145,982**
32	$514,800	15%	**$592,020**
33	$51,368	15%	**$59,073**
34	$38,410	15%	**$44,172**
35	$235,525	15%	**$270,854**
36	$96,311	15%	**$110,758**
37	$235,525	15%	**$270,854**
38	$235,525	15%	**$270,854**
39	$235,525	15%	**$270,854**
40	$37,424	15%	**$43,038**
41	$186,534	15%	**$214,514**
Total	$5,974,422		**$6,870,590**

Fire Station	Summary							
	Construction	Site Preparation	Site Development	FF&E	SubTotal	Soft Cost Rate	Soft Costs	**Total**
2	$6,158,880		$25,000	$870,870	$7,054,750	61%	$4,303,398	**$11,358,148**
6	$3,176,010	$588,090	$297,875	$354,344	$4,416,319	53%	$2,340,649	**$6,756,968**
8	$683,340		$120,000	$43,998	$847,338	61%	$516,876	**$1,364,214**
9	$2,208,060	$235,200	$144,850	$270,854	$2,858,964	53%	$1,515,251	**$4,374,215**
11	$496,740		$32,205	$83,059	$612,004	61%	$373,322	**$985,326**
13	$200,800		$47,095	$53,006	$300,901	68%	$204,613	**$505,514**
14	$3,299,400		$369,840	$424,063	$4,093,303	61%	$2,496,915	**$6,590,218**
16	$300,000		$12,205	$90,580	$402,785	61%	$245,699	**$648,484**
17	$4,564,500	$350,000	$60,000	$321,019	$5,295,519	61%	$3,230,267	**$8,525,786**
18	$840,000		$49,500	$177,990	$1,067,490	68%	$725,893	**$1,793,383**
20	$2,277,180	$450,000	$164,150	$270,854	$3,162,184	53%	$1,675,958	**$4,838,142**
21	$2,208,060	$226,600	$123,850	$270,854	$2,829,364	53%	$1,499,563	**$4,328,927**
22	$2,208,060	$224,360	$121,050	$270,854	$2,824,324	53%	$1,496,892	**$4,321,216**
24	$274,200		$53,350	$85,316	$412,866	68%	$280,749	**$693,615**
25	$888,000		$40,000	$107,810	$1,035,810	68%	$704,351	**$1,740,161**
26	$236,000		$60,285	$44,559	$340,844	68%	$231,774	**$572,618**
27	$238,400		$191,440	$50,754	$480,594	68%	$326,804	**$807,398**
28	$2,787,000	$1,652,100	$348,515	$424,063	$5,211,678	61%	$3,179,124	**$8,390,802**
28	$891,000				$891,000	61%	$543,510	**$1,434,510**
29	$230,160		$26,870	$91,916	$348,946	68%	$237,283	**$586,229**
30	$2,208,060	$382,280	$273,400	$270,854	$3,134,594	53%	$1,661,335	**$4,795,929**
31	$1,034,400		$27,960	$145,982	$1,208,342	61%	$737,089	**$1,945,431**
32	$5,054,940	$363,200	$149,780	$592,020	$6,159,940	53%	$3,264,768	**$9,424,708**
33	$534,700		$113,715	$59,073	$707,488	68%	$481,092	**$1,188,580**
34	$465,900		$39,605	$44,172	$549,677	68%	$373,780	**$923,457**
35	$2,533,680	$199,160	$90,450	$270,854	$3,094,144	53%	$1,639,896	**$4,734,040**
36	$343,500		$47,750	$110,758	$502,008	68%	$341,365	**$843,373**
37	$2,208,060	$450,000	$225,850	$270,854	$3,154,764	53%	$1,672,025	**$4,826,789**
38	$2,208,060	$450,000	$225,850	$270,854	$3,154,764	53%	$1,672,025	**$4,826,789**
39	$2,818,800	$673,040	$580,300	$270,854	$4,342,994	53%	$2,301,787	**$6,644,781**
40	$244,000		$41,410	$43,038	$328,448	68%	$223,345	**$551,793**
41	$1,398,000		$18,820	$214,514	$1,631,334	61%	$995,114	**$2,626,448**
Total	$55,217,890	$6,244,030	$4,122,970	$6,870,590	$72,455,480		$41,492,512	**$113,947,992**

2003 Fire Station Levy Review
Seattle, Washington

Program Budget Overview
December 2005
0278-7403-110

Soft Cost Analysis

	Renovation			New Construction
	Minor	Moderate	Major	
Washington State Sales Tax	8.5%	8.5%	8.5%	8.5%
Unforeseen Conditions				
Design Period Contingency		Included in proposed unit rates		
Construction Period Contingency	15.0%	12.0%	12.0%	10.0%
Permit & Plan Check	2.0%	2.0%	2.0%	2.0%
Print & Bidding	1.0%	1.0%	1.0%	1.0%
Design Services & Consultants	20.0%	15.0%	15.0%	12.0%
Design Commission	0.3%	0.3%	0.3%	0.3%
Sustainable Construction (LEED Silver)		Included in proposed unit rates		
Commissioning & QC	1.0%	3.0%	3.0%	3.0%
Project Management	9.0%	8.0%	8.0%	5.0%
Management Reserve	5.4%	5.4%	5.4%	5.4%
Test & Inspection	4.0%	3.0%	3.0%	2.0%
Public Art	1.6%	1.6%	1.6%	1.6%
Move & Closeout	0.5%	1.0%	1.3%	2.0%
Predesign Planning & Programming	0.0%	0.0%	0.0%	0.0%
	68.3%	60.8%	61.1%	52.8%
Rounded	68.0%	61.0%	61.0%	53.0%

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible: No Cost	Possible: Minor Cost	Possible: Significant cost	Possible: Unlikely	Possible: Not Possible	
Sustainable Sites										
Req		Prerequisite 1 Erosion & Sedimentation Control	Design a sediment and erosion control plan, specific to the site, that conforms to US EPA Document No. EPA-832-R-92-005 (September 1992), Storm Water Management for Construction Activities, Chapter 3, OR local Erosion and Sedimentation Control standards and codes, whichever is more stringent.							
		Credit 1 Site Selection	Do not develop buildings, roads or parking areas on portions of sites that meet any one of the following criteria: Prime farmland as defined by the US Dept. of Agriculture in the US Code of Federal Regulations Land whose elevation is lower than 5 feet above the elevation of the 100-year flood as defined by the Federal Emergency Management Agency Land which is specifically identified as habitat for any species on Federal or State threatened or endangered lists Within 100 feet of any water including wetlands as defined by US Code of Federal Regulations and isolated wetlands or areas of special concern identified by state or local rule, OR greater than distances given in state or local regulations as defined by local or state rule or law, whichever is more stringent	**1**						
		Credit 2 Development Density	Increase localized density to conform to existing or desired density goals by utilizing sites that are located within an existing minimum development density of 60,000 square feet per acre (2 story downtown development)						**1**	
		Credit 3 Brownfield Redevelopment	Develop on a site documented as contaminated (by means of an ASTM E1903-97 Phase II Environmental Assessment) OR on a site classified as a brownfield by a local, state or federal government agency. Effectively remediate site contamination.					**1**		
		Credit 4-1 Alternative Transportation - Public Transportation Access	Locate project within ½ mile of a commuter rail, light rail or subway station or ¼ mile of 2 or more public or campus bus lines usable by building occupants		**1**					

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible: No Cost	Possible: Minor Cost	Possible: Significant cost	Unlikely	Not Possible	
		Credit 4-2 Alternative Transportation - Bicycle Storage & Changing Rooms	For commerical or institutional buildings, provide secure bicycle storage with convenient changing/shower facilities (within 200 yards of the building) for 5% or more of regular building occupants.			1				
		Credit 4-3 Alternative Transportation - Alternative Fuel Vehicles	Provide alternative fuel vehicles for 4% of building occupants AND provide preferred parking for these vehicles, OR install alternative-fuel refueling station(s) for 3% of the total vehicle parking capacity of the site. Liquid or gaseous fueling facilities must be separately ventilated or located outdoors.			1				
		Credit 4-4 Alternative Transportation - Parking Capacity	Size parking capacity to meet, but not to exceed, minimum local zoning requirements AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants; OR add no new parking for rehabilitation projects AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants.	1						
		Credit 5-1 Reduced Site Disturbance - Protect or Restore Open Space	On greenfield sites, limit site disturbance including earthwork and clearing of vegetation to 40 feet beyond the building perimeter, 5 feet beyond primary roadway curbs, walkways, and main utility branch trenches, and 25 feet beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities and playing fields) that require additional staging areas in order to limit compaction in the paved area; OR, on previously developed sites, restore a minimum of 50% of the site area (excluding the building footprint) by replacing imprevious surfaces with native or adapted vegetation.					1		
		Credit 5-2 Reduced Site Disturbance - Development Footprint	Reduce the development footprint (defined as entire building footprint, access roads and parking) to exceed the local zoning's open space requirement for the site by 25%. For areas with no local zoning requirements (i.e., some university campuses and military bases), designate open space area adjacent to the building that is equal to the development footprint.				1			

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
		Credit 6-1 Stormwater Management - Rate and Quantity	If existing impreviousness is less than or equal to 50%, implement a stormwater management plan that prevents the post-development 1.5 year, 24 hour peak discharge rate from exceeding the pre-development 1.5 year, 24 hour peak discharge rate. OR If existing imperviousness is greater than 50%, implement a stormwater management plan that results in a 25% decrease in the rate and quantity of stormwater runoff.				1			
		Credit 6-2 Stormwater Management - Treatment	Construct site water stormwater treatment systems designed to remove 80% of the average annual post-development total suspended solids (TSS), and 40% of the average annual post-development total phosphorous (TP) based on the average annual loading from all storms less than or equal to the 2-year/24-hour storm.					1		
		Credit 7-1 Heat Island Effect - Non-Roof	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of non-roof impervious surface on the site, including parking lots, walkways, plazas, etc., OR, use light-colored/high-albedo materials (reflectance of at least 0.3) for 30% of the site's non-roof impervious surfaces, OR place a minimum of 50% of parking space underground OR use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the parking lot area.	1						
		Credit 7-2 Heat Island Effect - Roof	Use ENERGY STAR compliant (highly reflective) AND high emissivity roofing (emissivity of at least 0.9 when tested in accordance with ASTM 408) for a minimum of 75% of the roof surface; OR, install a "green" (vegetated) roof for at least 50% of the roof area.			1				
		Credit 8 Light Pollution Reduction	Meet or provide lower light levels and uniformity ratios than those recommended by the Illuminating Engineering Society of North America (IESNA) Recommended Practice Manual: Lighting for Exterior Environments.	1						

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
Water Efficiency										
		Credit 1-1 Water Efficient Landscaping - Reduce by 50%	Use high efficiency irrigation technology, OR use captured rain or recycled site water, to reduce potable water consumption for irrigation by 50% over conventional means.	1						
		Credit 1-2 Water Efficient Landscaping - No Potable Use or No Irrigation	Use only captured rain or recycled site water to eliminate all potable water use for site irrigation (except for initial watering to establish plants), OR do not install permanent landscape irrigation systems.	1						
		Credit 2 Innovative Wastewater Technologies	Reduce the use of municipally provided potable water for building sewage conveyance by a minimum of 50%, OR treat 100% of waste water on site to tertiary standards.						1	
		Credit 3-1 Water Use Reduction - 20% Reduction	Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting Energy Policy Act of 1992 fixture performance requirements.	1						
		Credit 3-2 Water Use Reduction - 30% Reduction	Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.				1			

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
Energy & Atmosphere										
		Prerequisite 1 Fundamental Building Systems Commissioning	Implement or have a contract in place to implement the following fundamental best practice commissioning procedures: Engage a commissioning team that does not include individuals directly responsible for project design or construction management Review the design intent and the basis of design documentation Incorporate commissioning requirements into the construction documents Develop and utilize a commissioning plan Verify installation, functional performance, training and operation and mantenance documentation Complete a commissioning report							
		Prerequisite 2 Minimum Energy Performance	Design the building to meet comply with ASHRAE/IESNA 90.1-1999 or the local energy code, whichever is more stringent.							
		Prerequisite 3 CFC Reduction in HVAC&R Equipment	Zero use of CFC-based refrigerants in new building HVAC&R							
		Credit 1 Optimize Energy Performance	Reduce design energy cost compared to the energy cost budget for energy systems regulated by ASHRAE/IESNA Standard 90.1-1999 (without amendments), as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 11 of the Standard.	2		2	4		2	
		Credit 2-1 Renewable Energy - 5%.	Supply at least 5% of the building's total energy use (as expressed as a fraction of annual energy cost) through the use of on-site renewable energy systems.					1		
		Credit 2-2 Renewable Energy - 10%	Supply at least 10% of the building's total energy use (as expressed as a fraction of annual energy cost) through the use of on-site renewable energy systems.					1		
		Credit 2-3 Renewable Energy - 20%	Supply at least 20% of the building's total energy use (as expressed as a fraction of annual energy cost) through the use of on-site renewable energy systems.					1		

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
		Credit 3 Additional Commissioning	In addition to the Fundamental Building Commissioning pre-requisite, implement or have a contract in place to implement the following additional commissioning tasks: A commissioning authority independent of the design team shall conduct a review of the design prior to the construction documents phase An independent commissioning authority shall conduct a review of the construction documents near completion of the construction document development and prior to issuing the contract documents for construction An independent commissioning authority shall review the contractor submittals relative to systems being commissioned Provide the owner with a single manual that contains the information required for re-commissioning building systems Have a contract in place to review building operation with O&M staff, including a plan for resolution of outstanding commissioning-related issues within one year after construction completion date.				1			
		Credit 4 Ozone Depletion	Install base building level HVAC and refrigeration equipment and fire suppression systems that do not contain HCFCs or Halons.	1						
		Credit 5 Measurement & Verification	Install continuous metering equipment for the following end-uses: Lighting systems and controls Constant and variable motor loads Variable frequency drive (VFD) operation Chiller efficiency at variable loads (kW/ton) Cooling load Air and water economizer and heat recovery cycles Air distribution static pressures and ventilation air volumes Boiler efficiencies Building-related process energy systems and equipment Indoor water risers and outdoor irrigation systems				1			
		Credit 6 Green Power	Provide at least 50% of the building's electricity from renewable sources by engaging in at least a two-year renewable energy contract.	1						

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
Materials & Resources										
		Prerequisite 1 Storage & Collection of Recyclables	Provide an easiliy accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling.							
		Credit 1-1 Building Reuse - Maintain 65% of Existing Walls, Floors and Roof	Maintain at least 75% of existing building structure and shell.						1	
		Credit 1-2 Building Reuse - Maintain 100% of Existing Walls, Floors and Roof	Maintain an additional 25% (100% total) of existing building structure and shell.						1	
		Credit 1-3 Building Reuse - Maintain 100% of Shell/Structure and 50% of Non-Shell/Non-Structure	Maintain 100% of existing building structure and shell AND at least 50% of non-shell areas.						1	
		Credit 2-1 Construction Waste Management - Divert 50% From Landfill	Develop and implement a waste management plan, quantifying material disversion goals. Recycle and/or salvage at least 50% of construction, demolition and land clearing waste.	1						
		Credit 2-2 Construction Waste Management - Divert 75% From Landfill	Develop and implement a waste management plan, quantifying material disversion goals. Recycle and/or salvage an additional 25% (75% total) of construction, demolition and land clearing waste.	1						
		Credit 3-1 Resource Reuse - 5%	Use salvaged, refurbished or reused materials, products and furnishings for at least 5% of building materials.						1	
		Credit 3-2 Resource Reuse - 10	Use salvaged, refurbished or reused materials, products and furnishings for at least 10% of building materials.						1	

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
		Credit 4-1 Recycled Content - Use 5% Post-Consumer or 10% Post-Consumer + 1/2 Post-Industrial	Use materials with recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project OR combined post-consumer and 1/2 post-industrial recycled content constitutes at least 10%.				1			
		Credit 4-2 Recycled Content - Use 10% Post-Consumer or 20% Post-Consumer + 1/2 Post-Industrial	Use materials with recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project OR combined post-consumer and 1/2 post-industrial recycled content constitutes at least 10%.				1			
		Credit 5-1 Local/Regional Materials - 20% Manufactured Regionally	Use a minimum of 20% of building materials and products that are manufactured regionally within a radius of 500 miles.			1				
		Credit 5-2 Local/Regional Materials - 50% Extracted Regionally	Of the regionally manufactured materials documented for MR Credit 5.1, use a minimum of 50% of building materials and products that are extracted, harvested or recovered (as well as manufactured) within 500 miles of the project site.				1			
		Credit 6 Rapidly Renewable Materials	Use rapidly renewable building materials and products (made from plants that are typically harvested within a ten-year cycle or shorter) for 5% of the total value of all building materials and products used in the project.					1		
		Credit 7 Certified Wood	Use a minimum of 50% of wood-based materials and products, certified in accordance with the Forest Stewardship Council's Principles and Criteria for wood building components.	1						

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
Indoor Environmental Quality										
		Prerequisite 1 Minimum IAQ Performance	Meet the minimum requirements of voluntary consensus standart ASHRAE 62-1999, Ventilation for Acceptable Indoor Air Quality, using the Ventilation Rate Procedure.							
		Prerequisite 2 Environmental Tobacco Smoke (ETS) Control	Zero exposure of non-smokers to ETS by EITHER: prohibiting smoking in the building and locating any exterior designated smoking areas away from entries and operable windows; OR providing a designated smoking room designed to effectively contain, capture and remove ETS from the building.							
		Credit 1 Carbon Dioxide (CO 2) Monitoring	Install a permanent carbon dioxide (CO 2) monitoring system that provides feedback on space ventilation performance in a form that affords operational adjustments.				1			
		Credit 2 Increase Ventilation Effectiveness	For mechanically ventilated buildings, design ventilation systems that result in an air change effectiveness (Eac) greater than or equal to 0.9 as determined by ASHRAE 129-1997. For naturally ventilated spaces demonstrate a distribution and laminar flow pattern that involves not less than 90% of the room or zone area in the direction of air flow for at least 95% of hours of occupancy.				1			
		Credit 3-1 Construction IAQ Management Plan - During Construction	Develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building as follows: During construction meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 1995. Protect stored on-site or installed absorptive materials from moisture damage. If air handlers must be used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1000. Replace all filtration media immediately prior to occupancy. Filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 13 as determined by ASHRAE 52.2-1999 for media installed at the end of construction.			1				

Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible			Unlikely	Not Possible	
					No Cost	Minor Cost	Significant cost			
		Credit 3-2 Construction IAQ Management Plan - Before Occupancy	Develop and implement an Indoor Air Quality (IAQ) Management Plan for the pre-occupancy phase as follows: After construction ends and prior to occupancy conduct a minimum two-week building flush-out with new Minimum Efficiency Reporting Value (MERV) 13 filtration media at 100% outside air after construction ends and prior to occupancy. After the flushout, replace the filtration media with new MERV 13 filtration media, except the filters solely processing outside air. OR Conduct a baseline indoor air quality testing procedure consistent with the US EPA's current Protocol for Environmental Requirements, Baseline IAQ and Materials, for the Research Triangle Park Campus, Section 01445.			1				
		Credit 4-1 Low-Emitting Materials - Adhesives & Sealants	The VOC content of adhesives and sealants used must be less than the current VOC content limits of South Coast Air Quality Management District Rule #1168, AND all sealants used as fillers must meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51.	1						
		Credit 4-2 Low-Emitting Materials - Paints and Coatings	VOC emissions from paints and coatings must not exceed the VOC and chemical component limits of Green Seal's Standard GS-11 requirements.	1						
		Credit 4-3 Low-Emitting Materials - Carpet	Carpet systems must meet or exceed the requirements of the Carpet and Rug Institute's Green Label Indoor Air Quality Test Program.	1						
		Credit 4-4 Low-Emitting Materials - Composite Wood	Composite wood and agrifiber products must contain no added urea-formaldehyde resins.	1						
		Credit 5 Indoor Chemical & Pollutant Source Control	Design to minimize cross-contamination of regularly occupied occupancy areas: Employ permanent entry way systems to capture dirt, particulates, etc. from entering the building at all high volume entry ways. Where chemical use occurs provide segregated areas with deck to deck partitions with separate outside exhausting. Provide drains plumbed for appropriate disposal of liquid waste in spaces where water and chemical concentrate mixing occurs.				1			

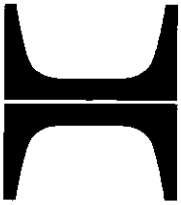
Prototypical New Fire Station
LEED v2.1 Rating System Worksheet

Credit Category / Name			Requirements	Point Status						Remarks
				Yes	Possible: No Cost	Possible: Minor Cost	Possible: Significant cost	Possible: Unlikely	Not Possible	
		Credit 6-1 Controllability of Systems - Perimeter Spaces	Provide at least an average of one operable window and one lighting control zone per 200 SF for all regularly occupied areas within 15 feet of the perimeter wall.				1			
		Credit 6-2 Controllability of Systems - Non-Perimeter Spaces	Provide controls for each individual for airflow, temperature, and lighting for at least 50% of the occupants in non-perimeter, regularly occupied areas.					1		
		Credit 7-1 Thermal Comfort - Compliance with ASHRAE 55-1992	Comply with ASHRAE Standard 55-1992, Addenda 1995 for thermal comfort standards including humidity control within established ranges per climate zone. For naturally ventilated buildings, utilize the adaptive comfort temperature boundaries.	1						
		Credit 7-2 Thermal Comfort - Permanent Monitoring System	Install a permanent temperature and humidity monitoring system configured to provide operators control over thermal comfort performance and effectiveness of humidification and/or dehumidification systems in the building.				1			
		Credit 8-1 Daylight & Views - Daylight 75% of Spaces	Achieve a minimum Daylight Factor of 2% in 75% of all space occupied for critical visual tasks.					1		
		Credit 8-2 Daylight & Views - Views for 90% of Spaces	Achieve direct line of sight to vision glazing for building occupants in 90% of all regularly occupied spaces.			1				
Innovation & Design Process										
		Credit 1-1 Innovation in Design		1						
		Credit 1-2 Innovation in Design		1						
		Credit 1-3 Innovation in Design				1				
		Credit 1-4 Innovation in Design				1				
		Credit 2 LEED TM Accredited Professional		1						
POINT TOTALS:				22	1	11	17	9	9	

Neighborhood Fire Station
Financial Update

Appendix C
Hoffman Construction Peer Review

Fire Facilities and Emergency Response Levy Program



HOFFMAN CONSTRUCTION COMPANY
OF WASHINGTON

November 17, 2005

Dove Alberg
Director, Fleets and Facilities Department, City of Seattle
Capital Programs Division
700 5th Avenue, Suite 5200
P.O. Box 94689
Seattle, WA 98124-4689

RE: Review of Fire Levy Program proposed Budgets

Dear Ms Alberg,

Per our meeting on Monday of this week, you requested that Hoffman Construction provide input on the proposed Fire Levy Program proposed budgets. Specifically, we were to review the proposed square footage cost for the various types of construction, comment on the escalation issues affecting the construction market over the last two years, and provide any insight on how the current heated market conditions may be impacting the cost of delivered projects.

Overview:

We understand the fire levy was passed by the Seattle voters in November 2003. The proposed budgets for the multiple elements of the levy were developed between that time and March 2004, at which time the budgets were presented to the Mayor and City Council and approved.

Much has happened in the market since March 2004. Outside market conditions related to the global economy have put construction materials under stress. Prior to early 2004 we had seen a period of static material prices. Beginning in approximately April 2004, the price of materials began to skyrocket. It started in the area of metals, with the demand of the growing Chinese economy dominating the recycled materials market. Other materials soon followed, such as cement and lumber.

Other market factors also started to have an impact. The price of fuel has impacted every sector of the building materials market. The recent natural disasters in the Nation's Southeast is also bound to keep a high demand on materials. The global economy will continue to compete for materials.

All of this uncertainty has had a disruptive impact on the cost of projects.

1505 WESTLAKE AVENUE NORTH, SUITE 500 SEATTLE, WASHINGTON 98109 206-286-6697 FAX 206-286-7523

Proposed Square Footage Cost:

Let's start with an analysis of the proposed square foot cost. The proposed rates for new construction are $270 - $300/SF for new construction, and $40/$60/$180 for minor, moderate, and major renovation cost, respectively.

Precision Construction:

Hoffman Construction has a subsidiary company, Precision Construction, which does projects that I would consider to be commensurate with the work proposed for many of the Fire Stations of this levy, and as such would provide a good reference point for a discussion on cost.

The following projects were recently completed by Precision:

1.	Forest Interpretive Center	15,000 SF	$467/SF
2.	Minor TI Work/Private Client	47,000 SF	$21/SF
3.	Church Addition	24,000 SF	$88/SF
4.	Complex Renovation/Private Client	1,000 SF	$210/SF
5.	Complex TI Project/Private Client	1,500 SF	$177/SF

Complex Projects:

Hoffman Construction has completed or started a number of large projects in the Northwest. Although many of these are hard to relate to the requirements of the smaller renovations of the Fire Levy, they do provide and interesting point of comparison. All cost shown are escalated to 2005:

1.	Public Safety Academy	300,000 SF	$252/SF
2.	Seattle Justice Center	294,000 SF	$298/SF
3.	Skagit Hospital	220,465 SF	$303/SF
4.	Seattle City Hall	200,000 SF	$337/SF
5.	Monroe Corrections	112,450 SF	$353/SF
6.	Deschutes Public Safety	52,000 SF	$432/SF
7.	Federal Reserve Bank	100,455 SF	$481/SF
8.	UW Surgery Pavilion	176,000 SF	$510/SF

Fire Station 1:

Currently in Portland we are working with the City on budgeting of their new Fire Station 1. This station is does not have an EOC such as Fire Station 10, therefore the cost per square foot should align with other stations with the Seattle fire levy.

1.	Fire Station 1	93,957 SF	$276/SF

The detail for this estimate is included as Attachment "A".

Other Fire Station Budget Comparisons:

Reference attachment "B". This is an analysis by a cost consultant working for the City of Portland as they go through a similar situation as you do in regards to a budget that was established a couple of years ago. This analysis, in the lower left hand corner, outlines the cost of construction of some of their Fire Stations, and outlines their approach for dealing with escalation. The prices shown are escalated to September 2005 cost:

1. Station 12 $219/SF
2. Station 16 $326/SF
3. Station 28 $242/SF
4. Station 9 $233/SF
5. Station 27 $314/SF

Summary of Proposed Square Footage Cost:

From the above information, it is clear to see that the cost per square foot can be a difficult thing to nail down on a generic basis – each facility has a uniqueness that impacts the ultimate cost.

However, the information tends to support the argument that new construction for Fire Stations is going to be in the $230/SF to $330/SF. The renovation cost of $40/$60/$180/SF also appears to be supported. We agree with your independent cost consultant's recommendation to proceed forward with the proposed square footage cost of $270/SF to $300/SF given this budgeting is at a programming level.

Escalation and Market Conditions:

There are many sources of material available to evaluate the escalation issues that we've witnessed in the last 20 months. The publication Engineering News Record has excellent material for each of the major markets in the United States.

Please refer back to attachment "B" for the approach used by the City of Portland on Fire Station 1. They have concluded that a compounded escalation rate of 26.41% should be applied from the time the proposed budget was established (2003) to the midpoint of construction (5/2007).

We are also forwarding to you, as attachment "C", the Associated General Contractor's report from their Chief Economist. This report provides some interesting insight on construction materials.

Attachment "D" is a summary of the Prevailing Wage increases in the Northwest from 2000 to 2005. Although wage increases have not contributed significantly to the overall escalation issue, it is a component of it.

Current Market Conditions:

This is a hard one for folks to get their hands around. Quite simply, there are more opportunities in the marketplace for General Contractors and Subcontractors to chose from than there was just 12 months ago.

As a General Contractor we rely on Subcontractors for about 85% of a project's budget. The availability of viable Subcontractors therefore has a significant impact on the overall cost of a project. Subcontractors have limited resources, and they are going to apply those resources to the projects that allow them the best chance to maximize their returns. However painful it is for all of us in these times, it is nothing more than free market conditions at work. Our challenge is to recognize this phenomenon and react to it quickly.

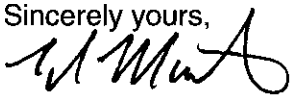
Let's look at some recent Hoffman projects to see the impact of the current market. The following outlines the number of mechanical and electrical bidders on large commercial projects:

	Date	# Mech Bids	#Elec Bids
1. Bioengineering	Jan 2003	5	6
2. Roosevelt HS	Aug 2004	4	5
3. Everett WWTP	May 2005	2	3
4. Skagit Hospital	Oct 2005	3	2

You could conclude from the above that the market changed from Jan 2003 to Oct 2005. This is impacting all trades, not just the mechanical and electrical trades. Short of a major economical event with negative consequences, we do not see a change in current market conditions for some time to come.

I hope this helps you evaluate your program as you move forward in this uncertain time of cost growth. If there is anything else we can help you with, please feel free to contact me at 206-286-6697.

Sincerely yours,



Lyle Martin, P.E.

Attachment "A"

Fire Station 1 Budget

Hoffman Construction Company

BUILDING: Fire Station #1
LOCATION: Portland, OR
ARCHITECT THA
SUBJECT: Budget Summary

ESTIMATE NO:
ESTIMATOR: LMC
CHECKED BY:
UPDATED ---> 9/14/05

	Current 9/14/05		Conceptual dated 8/22/05
GSF --->	93,957		100,063
DIVISION 2 -- SITEWORK	2,259,085	530,000	$1,729,085
DIVISION 3 -- CONCRETE	3,897,706	(599,695)	$4,497,401
DIVISION 4 -- MASONRY	0	0	$0
DIVISION 5 -- STEEL	344,435	(9,160)	$353,595
DIVISION 6 -- CARPENTRY	22,778	(1,526)	$24,304
DIVISION 7 -- THERMAL & MOISTURE PROTECTION	455,852	8,379	$447,473
DIVISION 8 -- DOORS & WINDOWS	3,876,000	(1,510,200)	$5,386,200
DIVISION 9 -- FINISHES	38,250	0	$38,250
DIVISION 10 -- SPECIALTIES	144,119	(17,358)	$161,477
DIVISION 11 -- EQUIPMENT	32,500	0	$32,500
DIVISION 12 -- FURNISHINGS	0	0	$0
DIVISION 14 -- ELEVATORS	350,000	0	$350,000
DIVISION 15 -- MECHANICAL	3,276,266	(722,449)	$3,998,715
DIVISION 16 -- ELECTRICAL	2,415,960	(2,534,748)	$4,950,708
Work Area Finishes	1,721,804	(281,061)	$2,002,865
LEEDS Construction	155,623	(1,924,603)	$2,080,226
SUBTOTAL - WORK ITEMS	18,990,377	(7,062,421)	26,052,798
General Conditions - Street Use - Insurance - Hoisting	2,595,231		3,345,880
Construction Fee	859,107		1,170,067
Contractor's Contingency	1,683,354		2,292,656
Escalation	1,809,605		2,464,605
TOTAL	25,937,674	(9,388,332)	35,326,006
GSF	93,957		100,063
Cost/gsf	$276		$353

Budget History:		Work Items	Total	Cost/Gsf
Conceptual dated 9/14/05		18,990,377	25,937,674	$276
GSF	- Minor Program Area adjustments made (was 100,063gsf before, now 93,957)			
Div 2	- Added dewatering allow of $100k (deeper fdn walls), piling per Engineer's narrative.			
	- added piling			
	- Mass exc increased to cover added height of fdn walls			
Div 3	- Per Engineer's narrative, adjusted Essential Facility premium from $15/sf to $10/sf			
	- Mat fdn changed to 12" sog with pilecaps.			
	- Fdn walls increased 14' flr to flr plus 4' for mat slab/rock pad (original @ 12' plus 3').			
Div 8	- Terra Cotta Shield & req'd support steel removed from budget. Now single skin.			
Div 15	- Mech narrative provided addt'l info showing this bldg will not be another Seattle FS #10.			
Div 16	- Elec narrative provided addt'l info showing this bldg will not be another Seattle FS #10. No 911 or emergency command center like Seattle.			
Leeds	- Changed to "certification only" (1%) from original budget of 10%			
Conceptual dated 8/22/05		26,052,798	35,326,006	$353
	- Original budget developed off THA presentation brochure dwgs and Seattle Fire Station #10 Estimate & dwgs.			

HOFFMAN CONSTRUCTION COMPANY

FIRE STATION #1

Summary of Concepts

Architect: Thomas Hacker Architects
Date: 11/8/05

Estimator: CLL
Checked By: LC

Item #	Description	Concept B Prime		Concept B.1		Concept C		Concept C.1		Remarks
		Area	Concept $	Area	Concept $	Area	Concept $	Area	Concept $	
1	**East Building**									
2	Level 1 (FS1 / Auditorium)	**15600**	$3,588,000	**15600**	$3,588,000	**15600**	$3,588,000	**15600**	$3,588,000	
3	Level 2 (Fire House / EOD)	**12500**	$2,500,000	**14616**	$2,923,200	**12500**	$2,500,000	**14616**	$2,923,200	
4	Level 2 (Terrace over Apparatus)	2100	$273,000	984	$127,920	2100	$273,000	984	$127,920	
5	Level 3 (Parking Ramp)	3000	$300,000	3000	$300,000	3000	$300,000	3000	$300,000	
6	Level 3 (Parking)	**15600**	$1,326,000	**15600**	$1,326,000	**15600**	$1,326,000	**15600**	$1,326,000	
7	Level 4 (Executive, MSD, FPD)	**12500**	$2,250,000	**15600**	$2,808,000	**12500**	$2,250,000	**14800**	$2,664,000	
8	Level 4 (Terrace over Office, Front)	2100	$273,000	0	$0	2100	$273,000	800	$104,000	
9	Level 5 (Executive, MSD)	**8400**	$1,512,000	**7592**	$1,366,560	0	$0	0	$0	
10	Level 5 (Terrace over Office)	4100	$533,000	8009	$240,270	0	$0	0	$0	
11	Roof Structure	15600	$312,000	7592	$151,840	15600	$312,000	15600	$312,000	
12	Site (Between Bldgs & Street Work)	8000	$240,000	8000	$240,000	8000	$240,000	8000	$240,000	
13										
14	Subtotal	**64600**	$13,107,000	**69008**	$13,071,790	**56200**	$11,062,000	**60616**	$11,585,120	
15		0		0		0		0		
16	**West Building**									
17	Level 1 (Learning Center)	**4500**	$720,000	**4500**	$720,000	**4500**	$720,000	**4500**	$720,000	
18	Level 2 (Learning Center	**4500**	$720,000	**4500**	$720,000	**4500**	$720,000	**4500**	$720,000	
19	Level 3 (FPD)	0	$0	0	$0	**4500**	$810,000	**4290**	$772,200	
20	Level 3 (Access Bridge)	0	$0	0	$0	500	$125,000	500	$125,000	
21	Level 3 (Terrace)	0	$0	0	$0	0	$0	210	$27,300	
22	Level 4 (FPD)	0	$0	0	$0	**3900**	$702,000	**4290**	$772,200	
23	Level 4 (Terrace)	0	$0	0	$0	600	$78,000	210	$27,300	
24	Level 4 (Access Bridge)	0	$0	0	$0	500	$125,000	500	$125,000	
25	Roof Structure	4500	$90,000	4500	$90,000	4500	$90,000	4500	$90,000	Revised from $100
26										
27	Subtotal	**9000**	$1,530,000	**9000**	$1,530,000	**17400**	$3,370,000	**17580**	$3,379,000	
28		0		0		0		0		
29										
30	Total Construction		$14,637,000		$14,601,790		$14,432,000		$14,964,120	
31	GCs / Street Use / Insurance / Hoisting		$1,902,810		$1,898,233		$1,876,160		$1,945,336	
32	Construction Fee (3.98%)		$658,284		$656,701		$649,065		$672,996	
33	Contractor's Contingency (7.5%)		$1,289,857		$1,286,754		$1,271,792		$1,318,684	
34	Escalation (7.5%)		$1,386,596		$1,383,261		$1,367,176		$1,417,585	
35										
36	Subtotal		$19,874,548		$19,826,739		$19,596,193		$20,318,721	
37			$0		$0		$0		$0	
38										
39	Habitable Building Total	**73,600**		**78,008**		**73,600**		**78,196**		
40	Building w/ Terraces Total	77,800		90,001		78,400		80,400		
41										

HOFFMAN CONSTRUCTION COMPANY

FIRE STATION #1

Option "B Prime" Concept Estimate

Architect: Thomas Hacker Architects
Date: 11/8/05

Estimator: CLL
Checked By: LC

Item #	Description	Area	Unit	$ / SF		ROM Cost	Remarks
1	**East Building**						
2	Level 1 (FS1 / Auditorium)	**15600**	sf	$230		$3,588,000	
3	Level 2 (Fire House / EOD)	**12500**	sf	$200		$2,500,000	
4	Level 2 (Terrace over Apparatus)	2100	sf	$130		$273,000	
5	Level 3 (Parking Ramp)	3000	sf	$100		$300,000	
6	Level 3 (Parking)	**15600**	sf	$85		$1,326,000	
7	Level 4 (FPD)	**12500**	sf	$180		$2,250,000	
8	Level 4 (Terrace over Office, Front)	2100	sf	$130		$273,000	
9	Level 5 (Executive, MSD)	**8400**	sf	$180		$1,512,000	
10	Level 5 (Terrace over Office)	4100	sf	$130		$533,000	
11	Roof Structure	15600	sf	$20		$312,000	
12	Site (Between Bldgs & Street Work)	8000	sf	$30		$240,000	
13							
14	Subtotal	**64600**	sf	$203		$13,107,000	
15							
16	**West Building**						
17	Level 1 (Learning Center)	**4500**	sf	$160		$720,000	
18	Level 2 (Learning Center	**4500**	sf	$160		$720,000	
19	Roof Structure	4500	sf	$20		$90,000	Revised from $100
20							
21	Subtotal	**9000**	sf	$170		$1,530,000	
22							
23	Total Construction					$14,637,000	
24	GCs / Street Use / Insurance / Hoisting					$1,902,810	
25	Construction Fee (3.98%)					$658,284	
26	Contractor's Contingency (7.5%)					$1,289,857	
27	Escalation (7.5%)					$1,386,596	
28							
29	Habitable Building Total	**73,600**	sf	$270		$19,874,548	
30	Building w/ Terraces Total	84,900	sf	$234			
31							
32	Allowance for Training Tower / Stair					$200,000	

Attachment "B"

Fire Station 1 Escalation Cost

Architectural Cost Consultants, LLC

James A. Jerde, AIA
Stanley J. Pszczolkowski, AIA
8060 SW Pfaffle Street, Suite 110
Tigard, Oregon 97223
e-mail archcost@aracnet.com

DATE: 13-Sep-2005
TO: Steve Simpson
FROM: Stan Pszczolkowski
PROJECT: PF & R Station 1 - Escalation Costs

Based on the Means Construction Cost Indexes

Year	Index	
2003	135.9	
Jan 2005	152.2	
index = 152.2 / 135.9 =	11.99%	percent of cost increase for the two years
Jan 05 to Aug 05 @ 5%	17.59%	(11.99 % x 5% compounded)
Aug 05 to May 07 @ 7.5%	26.41%	(17.59 % x 7.5% compounded)

Direct Costs in 2003 dollars		Inflated Costs	% Escalated per Exhibit E
site	$205,000	220,850	7.732%
demolition	75,000	80,799	7.732%
fire station	3,498,000	3,973,999	13.608%
administration	5,991,640	6,390,244	6.653%
museum	861,000	927,568	7.731%
learning center	936,000	1,008,367	7.732%
parking	1,711,000	1,843,286	7.732%
Total Direct Cost 2003 Dollars	13,277,640	14,445,113	8.793%

Escalation to 2005	Estimated Inflation		Actual Inflation		Delta
per Exhibit E	8.79%	1,167,473	11.99%	1,592,535	425,062
(two years @ 3.5% = 7.12 %) ???		13,277,640		13,277,640	
		14,445,113		14,870,175	425,062

Escalate 2003 Direct Cost to May 2007 @ 26.41 %				
Total Direct Cost 2003 Dollars			13,277,640	
Escalation	26.41%		3,507,070	
Total Escalated 2003 Direct Cost to May 2007		**87,120 sf**	**$16,784,710**	**$192.66 / sf**

Escalate Current New Station Costs to Sep 2005 and Escalate to May 2007 Costs

	Cost / SF as reported by BGS Aug 30, 05		Escalation Factor	Cost for Sept 05	Escalate to May 07	
Stn 12	182.80	x	1.202	219.65	1.075	236.12
Stn 16	271.19	x	1.202	325.86	1.075	350.30
Stn 28	209.28	x	1.158	242.36	1.075	260.53
Stn 9	189.59	x	1.231	233.42	1.075	250.93
Stn 27	309.84	x	1.015	314.49	1.075	338.07
Average	**232.54**			**267.15**		**287.19**
2003 $	**13,277,640**	x	1.1759	**15,613,684**	1.075	**16,784,710**
87,120 sf	**152.41**	x	1.1759	**179.22**	1.075	**192.66**

Attachment "C"

AGC's Construction Material Inflation Alert

Widespread Materials Inflation Demands Industry Attention

Contractors, project owners, budgeting and planning officials, and reporters often ask AGC why construction costs in the past two years seem to be rising so much faster than the general rate of inflation, or whether the disparity is real. This paper compares two common inflation measures, the consumer price index for all urban consumers (CPI-U) and the producer price index (PPI) for finished goods, against a variety of PPIs for construction materials and groupings of materials. Data are presented yearly for a nearly five-year period: years ending in December 2001, 2002, and 2003, and the two most recent 12-month periods, ending in September 2004 and September 2005. All figures are percentage changes from the same month one year earlier, as calculated by the Bureau of Labor Statistics (www.bls.gov/cpi for the CPI-U and www.bls.gov/ppi for all other indexes).

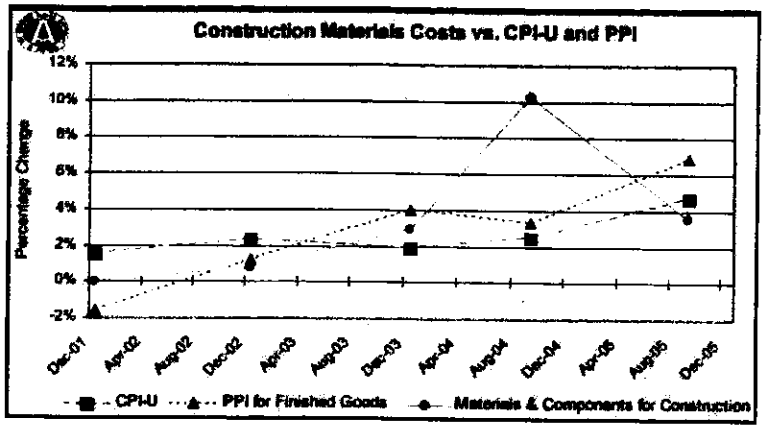
Construction Materials Rise While Consumer Prices Remain Moderate

In general, consumer prices have remained very moderate through the entire period, although they have accelerated in the past two years as oil prices have set new records. The PPI for finished goods, the broadest measure of prices received by sellers to final business or consumer customers, has also been "well-behaved" throughout the period, but with more of an upturn.

Construction costs have risen dramatically in 2004, 2005 or both, after having moved similarly to the overall PPI in the previous three years.

The data available so far do not reflect the impact of Hurricane Rita, and only partial impact from Katrina, on producer prices. Both storms struck especially hard at the supply of construction inputs ranging from diesel fuel to plastics to cement. As of lateOctober, the majority of Gulf of Mexico crude oil and natural gas production was still shut in, virtually assuring that construction materials that use oil or natural gas as a feedstock would be much higher-priced, at least through the winter heating season, than if the storms had not occurred. Katrina also interfered with imports of cement and natural rubber, and the hurricane damaged plants that produce gypsum, lumber and plywood, and liquid hydrogen for galvanizing steel. Chart 1 and Appendix Table 1 show that there was, on average, no change in costs for construction materials and components in the recession year of 2001 and an increase of less than one percent in 2002.

Chart 1



(Continued on page 2)

Costs rose during 2003 but still remained below the rise in the overall PPI. In general, these increases were not anticipated by either contractors or owners. Owners, in particular, may have been expecting construction cost increases to remain in the three percent range of overall consumer and producer prices.

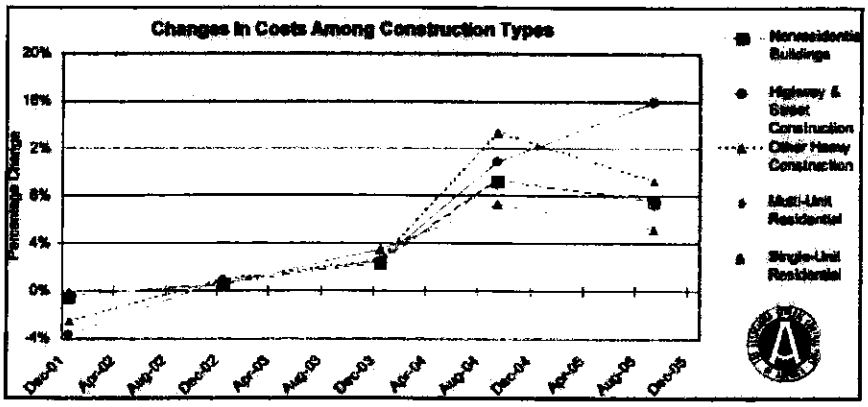
In late 2003 and much of 2004 prices rose sharply for many construction materials--first lumber and plywood, then steel, other metals, concrete, and gypsum products.

Costs Diverge Among Construction Types

In the last 12 months, lumber and plywood prices have dropped sharply. This decline has slowed the growth of costs for single-family homebuilding and improvements, which together account for about 50 percent of total construction. The drop has been steep enough to make it appear that construction materials costs in general are no longer rising as fast as either the CPI or the finished-goods PPI.

However, wood products are not a significant part of the materials cost for nonresidential construction, which has continued to experience larger cost increases than the overall CPI and PPI, as shown in Chart 2 and Appendix Table 2.

Chart 2

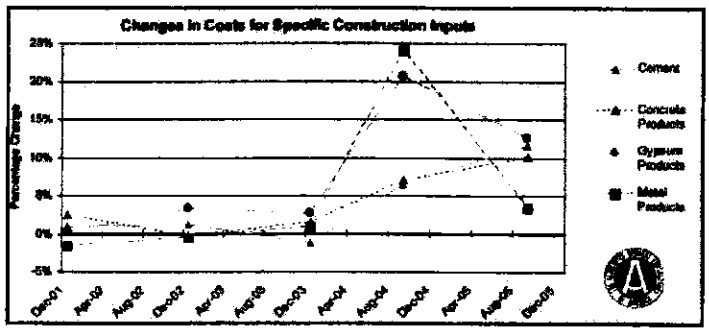


Between 2001 and 2003, costs for all types of construction behaved similarly. But the run-ups in steel, petroleum, and cement prices in the first half of 2004 made a bigger difference for nonresidential and multi-family construction than for single-family, which relies less heavily on these inputs. In the latest 12 months, the further increases in cement, diesel fuel, and asphalt prices particularly affected highway and street construction. Other heavy construction, nonresidential building, and multi-unit residential construction experienced some deceleration in costs as steel prices fell in recent months. Single-family residential construction benefited from the sharp fall in wood products prices, and recently from falling steel prices.

Major Construction Materials All Show Price Spikes in 2004-2005

Chart 3 and Appendix Table 3 explain several aspects of the construction price spikes. First, most prices either declined or experienced very modest increases in 2001-03. Consequently, many contractors and owners were making little or no provision for price increases in 2004.

Chart 3



Second, many prices exploded in the 12 months through September 2004: steel and copper/brass products for construction (19 to 62 percent higher), gypsum products (21 percent), asphalt and lumber/plywood (12 percent each), and insulation materials (11 percent).

(Continued on page 3)

Reported by AGC Chief Economist Ken Simonson

Nearly every other index rose more rapidly than in the previous three years. One businesss that was hit especially hard was metal fabrication. Metal fabricators that had contracted to provide products at fixed prices were squeezed by scrap surcharges and base-price hikes from mills. Some fabricators declared bankruptcy, and many stopped guaranteeing prices beyond a short period.

Contractors that had not locked in materials prices were caught by surprise and had to absorb huge, unexpected cost increases.

Third, contractors were affected in two ways in 2004 by higher diesel prices. Whereas the increases in 2002 and 2003 had roughly offset the decrease of 2001, prices set new records in 2004. That directly affected contractors for which fuel costs were significant, such as earthmovers, highway contractors and dump truck operators. In addition, the trucking market tightened significantly, partly in response to new hours-of-service rules for truck drivers that lengthened delivery times in some cases, and partly because a robust economy created strong demand for trucking services. Trucking companies passed along higher fuel and wage costs in the form of fuel surcharges and base delivery charges.

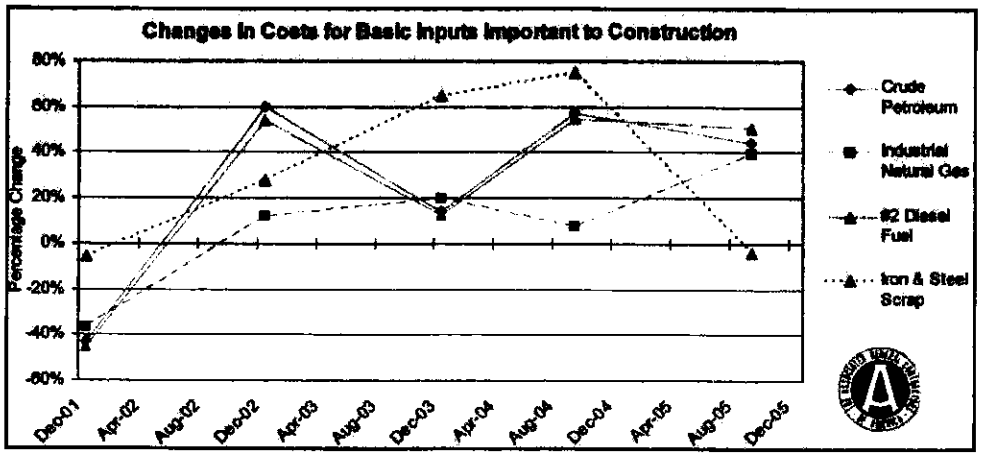
Fourth, in the latest 12 months, prices of inputs have diverged sharply. Prices for lumber/plywood and some steel products have declined, and other steel prices have slowed to three to four percent increases. But price increases asphalt jumped from 12 percent to 15 percent and concrete products went from seven percent to 10 percent. The increases for diesel fuel, copper/brass mill shapes, and gypsum products slowed but remained very elevated, at 51 percent, 19 percent, and 13 percent, respectively. Equipment prices rose seven percent at the producer level; higher delivery charges and the expiration of a tax break for equipment placed in service after 2004 have made the effective cost for contractors even higher.

These diverse price changes mean greater variance among both bids and actual costs, depending on the mix of materials and when they were spec-ed or bought, equipment intensity and age, and contractors' willingness or ability to include cost-sharing mechanisms or contingencies for future price increases.

Broad Input Prices Point to Higher Construction Costs Ahead

Future cost increases are always unpredictable, but some clues can be found by looking at indexes for basic inputs, such as those shown in Chart 4 and Appendix Table 4, that are important to construction.

Chart 4



The connection between the prices of several widely used inputs and intermediate or finished goods prices varies by material and specific market conditions. At a time when demand for construction materials is strong and many domestic producers are operating at capacity, cost increases at the raw materials stage are more likely to be passed on, particularly if one or two materials are major portions of the cost of the construction input.

(Continued on page 4)

Reported by AGC Chief Economist Ken Simonson

For example, concrete consists of cement, sand, gravel or crushed stone, and water, plus significant amounts of energy and fuel to mix and transport the ingredients. Construction plastics, which are made from either industrial natural gas or crude oil (as feedstock and fuel), and copper/brass mill shapes, from copper ores or scrap, also seem fated to experience further steep price increases, based on recent crude-materials prices.

With demand strong and prices rising rapidly for most of the inputs, it appears likely that prices for concrete products will continue to rise at least as sharply as the 10 percent increase of the last 12 months.

But the outlook for steel, some of which is from "mini-mills" that melt down scrap and some of which is from basic oxygen furnaces that combine iron ore, coke, and other ingredients, is less certain. Scrap prices have fallen in the past 12 months, while iron-ore prices have risen steeply. Furthermore, steel prices vary with the balance of worldwide supply and demand. That balance has fluctuated as demand has grown in China, India, and other industrializing countries, while China has also opened many steel mills.

Conclusion

The first issue of the Construction Inflation Alert highlights the fact that there is no longer a unified indicator to predict construction costs. In fact, construction has significantly diverged from the overall PPI in the last two years.

Many key categories such as diesel fuel, gypsum products, and copper and brass have seen double-digit price increases in both 2004 and 2005. The global building boom strained supplies of key construction components and may continue to produce large increases in demand for a wide variety of building components in the future. Conditions such as hurricanes and regulations on trucking also impact construction activities. The leveling off of prices for wood products has kept single-family residential construction inflation well below that of commercial construction and highway construction.

AGC believes that this information is critical to successful owners and contractors. Therefore, AGC will continue to use a wide variety of key indicators to analyze trends that will help keep its members consistently ahead of the curve.

Ken Simonson (simonsonk@agc.org) became Chief Economist of Associated General Contractors of America (AGC), the leading national trade association for the construction industry, on September 10th, 2001.

Ken has 30 years of experience analyzing, advocating and communicating about economic and tax issues. Before joining AGC, he spent three years as senior economic advisor in the Office of Advocacy of the U.S. Small Business Administration and 13 years as vice president and chief economist for the American Trucking Associations. He also worked with the President's Commission on Industrial Competitiveness, the U.S. Chamber of Commerce, the Federal Home Loan Bank Board, and an economic consulting firm.

Ken writes The Data DIGest, a weekly one-page email newsletter that summarizes the latest economic news relevant to construction. He is co-author of AGC's monthly Construction Tax News, a one-page email covering federal and state tax developments affecting the industry.

Ken has a BA in economics from the University of Chicago and an MA in economics from Northwestern University. He is a board member of the National Association for Business Economics.

Reported by AGC Chief Economist Ken Simonson

Appendix

Table 1: Construction Materials Costs vs. CPI-U and PPI

	Percentage change in 12 months ending:				
	12/01	12/02	12/03	9/04	9/05
CPI-U	1.6	2.4	1.9	2.5	4.7
PPI for finished goods	-1.6	1.2	4.0	3.3	6.9
Materials and components for construction	0.0	0.8	3.0	10.3	3.6

Table 2: Changes in Costs Among Construction Types

	Percentage change in 12 months ending:				
	12/01	12/02	12/03	9/04	9/05
Nonresidential buildings	-0.5	0.7	2.4	9.3	7.6
Highway and street construction	-3.6	1.0	2.6	11.0	16.0
Other heavy construction	-2.6	1.0	2.6	13.3	9.2
Multi-unit residential	-0.1	0.4	2.7	9.0	7.2
Single-unit residential	-0.4	0.6	3.5	7.3	5.2

Table 3: Changes in Costs for Specific Construction Inputs

	Percentage change in 12 months ending:				
	12/01	12/02	12/03	9/04	9/05
#2 diesel fuel	-44.7	54.4	13.0	54.7	50.9
Asphalt	not available		10.0	11.6	15.1
Paving mixtures and blocks	0.9	2.0	3.7	2.9	10.5
Concrete products	2.5	- 0.3	1.5	7.0	10.0
Concrete block and brick	2.3	1.6	3.2	4.8	8.0
Concrete pipe	4.4	1.7	1.4	4.4	4.3
Ready-mixed concrete	2.5	- 1.1	1.1	7.8	12.3
Precast concrete products	0.7	0.3	2.5	6.3	6.5
Prestressed concrete products	5.3	1.8	- 0.2	7.6	4.5
Brick and structural clay tile	5.3	1.9	0.7	3.1	5.2
Asphalt felts and coatings	4.6	- 0.6	6.3	2.1	13.2
Gypsum products	0.4	3.4	2.8	20.8	12.7
Insulation materials	0.4	- 1.5	2.0	11.2	- 0.3
Plastic construction products	- 2.7	3.1	3.2	6.3	5.4
Lumber and plywood	- 2.9	1.4	3.1	16.5	- 8.5
Steel mill products	- 6.1	11.1	1.7	48.2	- 5.5
Hot-rolled bars, plates, and structural shapes	- 4.3	2.1	11.3	61.0	- 2.0
Steel pipe and tube	- 3.7	9.1	3.3	66.0	0.3
Copper and brass mill shapes	- 9.5	- 1.6	11.6	32.2	19.2
Aluminum mill shapes	- 2.9	- 0.9	- 0.5	7.5	5.6
Structural, architectural, pre-engineered metal products	- 1.5	- 0.4	1.0	24.1	3.5
Fabricated structural metal	- 1.3	- 2.4	0.1	23.7	3.5
Fabricated structural metal for buildings	- 1.5	- 3.3	- 0.1	18.9	3.4
Architectural and ornamental metalwork	- 0.1	3.7	0.7	24.0	1.8
Fabricated iron and steel pipe, tube, and fittings	0.6	0.1	1.2	30.8	3.6
Nonferrous pipe, tube, and fittings	0.9	0.7	- 0.3	2.0	12.8
Fabricated steel plate	0.6	- 1.0	0.6	11.5	- 5.7
Prefabricated metal buildings	0.0	4.0	0.7	32.9	1.8
Construction machinery and equipment	- 0.1	1.9	1.3	3.9	6.7

Table 4: Change in Costs for Basic Inputs

	Percentage change in 12 months ending:				
	12/01	12/02	12/03	9/04	9/05
Crude petroleum	-42.4	60.6	14.3	57.7	44.6
Industrial natural gas	-36.7	12.2	20.3	7.9	39.7
Construction sand/gravel/crushed stone	3.3	2.5	2.4	3.8	7.4
Cement	1.0	1.3	- 1.1	6.6	11.6
Iron ore	1.5	- 1.3	1.6	1.9	20.8
Iron and steel scrap	- 5.6	27.8	64.9	75.0	- 4.0
Copper ores	-19.6	3.6	27.4	78.9	31.8
Copper base scrap	-17.4	11.2	30.7	43.2	47.8

Reported by AGC Chief Economist Ken Simonson

Attachment "D"

Prevailing Wage Rates

March and September Increases in Prevailing Wages

2/15/2005

	3/3/2005	8/31/2004	3/3/2004	8/31/2003	3/5/2003	8/31/2002	3/3/2002	8/31/2001	3/3/2001	8/31/2000	3/2/2000	Total Increase Dollars	Total Increase Percentage
Bricklayers	$39.87	$39.87	$38.37	$38.37	$36.87	$36.87	$35.37	$35.37	$33.87	$33.87	$32.77		
	$0.00	$1.50	$0.00	$1.50	$0.00	$1.50	$0.00	$1.50	$0.00	$1.10		$7.10	
	0.0%	3.9%	0.0%	4.1%	0.0%	4.2%	0.0%	4.4%	0.0%	3.4%			20.0%
Carpenters	$38.95	$38.95	$37.90	$37.90	$36.85	$36.00	$35.15	$34.34	$33.53	$32.70	$31.87		
	$0.00	$1.05	$0.00	$1.05		$0.85		$0.81		$0.83		$7.08	
	0.0%	2.8%	0.0%	2.8%		2.4%		2.4%		2.6%			20.3%
Millwrights	$39.95	$39.95	$38.90	$38.90	$37.85	$37.00	$36.15	$35.34	$34.53	$33.70	$32.87		
	$0.00	$1.05	$0.00	$1.05		$0.85		$0.81		$0.83		$7.08	
	0.0%	2.7%	0.0%	2.8%		2.4%		2.3%		2.5%			19.7%
Cement Masons	$40.01	$40.01	$38.94	$38.94	$37.89	$37.02	$36.15	$35.33	$34.50	$33.65	$32.80		
	$0.00	$1.07	$0.00	$1.05		$0.87		$0.83		$0.85		$7.21	
	0.0%	2.7%	0.0%	2.8%		2.4%		2.4%		2.6%			20.1%
Divers	$80.62	$80.62	$79.57	$79.57	$78.52	$77.02	$75.57	$74.30	$71.01	$71.01	$69.34		
	$0.00	$1.05	$0.00	$1.05		$1.45		$3.29	$0.00	$1.67		$11.28	
	0.0%	1.3%	0.0%	1.3%		1.9%		4.6%	0.0%	2.4%			15.3%
Electricians	$46.06	$46.06	$45.06	$44.83	$44.83	$43.83	$42.33	$41.33	$39.83	$39.83	$37.83		
	$0.00	$1.00		$0.00		$1.50		$1.50	$0.00	$2.00		$8.23	
	0.0%	2.2%		0.0%		3.5%		3.8%	0.0%	5.3%			20.0%
Elevator	$52.27	$49.28	$49.28	$46.46	$46.46	$43.50	$42.25	$42.25	$41.00	$41.00	$39.76		
		$0.00		$0.00		$1.25	$0.00	$1.25	$0.00	$1.24		$12.51	
		0.0%		0.0%		3.0%	0.0%	3.0%	0.0%	3.1%			28.1%
Glaziers	$39.96	$39.96	$38.96	$38.21	$37.46	$36.71	$35.96	$35.00	$34.46	$33.46	$32.21		
	$0.00	$1.00		$0.75		$0.75		$0.54		$1.25		$7.75	
	0.0%	2.6%		2.0%		2.1%		1.6%		3.9%			21.8%
Iron Workers	$43.12	$43.12	$41.02	$41.02	$39.02	$37.17	$37.17	$37.07	$35.87	$35.87	$34.47		
	$0.00	$2.10	$0.00	$2.00		$0.00		$1.20	$0.00	$1.40		$8.65	
	0.0%	5.1%	0.0%	5.1%		0.0%		3.3%	0.0%	4.1%			22.9%
Laborers	$32.61	$32.61	$31.86	$31.86	$30.86	$30.86	$29.67	$29.67	$28.53	$28.53	$27.43		
	$0.00	$0.75	$0.00	$1.00	$0.00	$1.19	$0.00	$1.14	$0.00	$1.10		$5.18	
	0.0%	2.4%	0.0%	3.2%	0.0%	4.0%	0.0%	4.0%	0.0%	4.0%			17.6%
Painters	$30.76	$30.76	$30.77	$29.60	$29.53	$28.63	$28.63	$27.63	$27.63	$26.67	$25.40		
	$0.00	-$0.01		$0.07		$0.00		$0.00		$1.27		$5.36	
	0.0%	0.0%		0.2%		0.0%		0.0%		5.0%			19.5%
Plasterers	$39.93	$39.93	$39.33	$39.33	$37.48	$37.48	$35.63	$35.63	$34.03	$34.03	$32.88		
	$0.00	$0.60	$0.00	$1.85	$0.00	$1.85	$0.00	$1.60	$0.00	$1.15		$7.05	
	0.0%	1.5%	0.0%	4.9%	0.0%	5.2%	0.0%	4.7%	0.0%	3.5%			19.9%

March and September Increases in Prevailing Wages

2/15/2005

	[illegible]	9/1/2004	3/3/2004	8/31/2003	3/3/2003	8/31/2002	3/3/2002	8/31/2001	3/3/2001	8/31/2000	3/3/2000	Total Increases Dollars	Total Increases Percentage
Plumbers	$51.01	$48.86	$48.71	$47.81	$46.81	$46.06	$44.76	$43.71	$42.71	$41.76	$40.91		
		$0.15		$1.00		$1.30		$1.00		$0.85		$10.10	
		0.3%		2.1%		2.9%		2.3%		2.1%			22.4%
Operators	$39.49	$38.49	$38.36	$38.36	$37.24	$37.24	$35.69	$35.69	$34.14	$34.14	$32.59		
	$0.00	$1.13	$0.00	$1.12	$0.00	$1.55	$0.00	$1.55	$0.00	$1.55		$6.90	
	0.0%	2.9%	0.0%	3.0%	0.0%	4.3%	0.0%	4.5%	0.0%	4.8%			19.6%
Roofers	$35.53	$34.53	$34.53	$34.53	$33.78	$33.78	$32.53	$31.03	$31.03	$31.03	$30.03		
		$0.00	$0.00	$0.75	$0.00	$1.25		$0.00	$0.00	$1.00		$5.50	
		0.0%	0.0%	2.2%	0.0%	3.8%		0.0%	0.0%	3.3%			17.1%
Sheet Metal	$46.74	$46.74	$45.43	$45.18	$42.63	$42.35	$39.68	$39.68	$37.43	$37.43	$36.13		
	$0.00	$1.31		$2.55		$2.67	$0.00	$2.25	$0.00	$1.30		$10.61	
	0.0%	2.9%		6.0%		6.7%	0.0%	6.0%	0.0%	3.6%			26.4%
Flooring	$32.24	$32.24	$31.52	$31.27	$30.58	$30.58	$30.60	$30.60	$29.59	$29.59	$28.58		
	$0.00	$0.72		$0.69	$0.00	-$0.02	$0.00	$1.01	$0.00	$1.01		$3.66	
	0.0%	2.3%		2.3%	0.0%	-0.1%	0.0%	3.4%	0.0%	3.5%			12.2%
Tile Setters	$37.03	$37.03	$35.63	$35.63	$34.23	$34.23	$32.83	$32.83	$31.88	$31.88	$30.98		
	$0.00	$1.40	$0.00	$1.40	$0.00	$1.40	$0.00	$0.95	$0.00	$0.90		$6.05	
	0.0%	3.9%	0.0%	4.1%	0.0%	4.3%	0.0%	3.0%	0.0%	2.9%			18.2%
Teamsters	$37.47	$37.47	$36.49	$36.47	$35.47	$35.47	$34.06	$34.06	$32.66	$31.26	$31.26		
	$0.00	$0.98		$1.00	$0.00	$1.41	$0.00	$1.40		$0.00		$6.21	
	0.0%	2.7%		2.8%	0.0%	4.1%	0.0%	4.3%		0.0%			18.5%

Snohomish County Crafts that have different Prevailing Wage Rates

Electricians	$42.26
Plasterers	$10.00
Plumbers	$46.57

Neighborhood Fire Station
Financial Update

Appendix D
Sensitivity Analysis

Fire Facilities and Emergency Response Levy Program

Appendix D – Sensitivity Analysis

The following table shows the effect of different assumptions on the additional funds required to complete the Fire Levy program:

Additional Funds Required by Levy Under Various Conditions

($1000's of nominal dollars)

	2007	2008	2009	2010	2011	2012	2013	2014	Total
Base	-	16,263	17,717	13,641	9,079	7,462	3,167	0	67,329
Original Project Spendout	14,237	19,225	17,440	9,749	-	1,256	-	-	61,907
Low Interest	-	16,263	17,717	13,641	9,079	7,566	3,167	0	67,433
High Interest	-	16,263	17,717	13,641	9,079	6,840	3,167	-	66,707
Slower Delivery	-	16,263	12,462	10,666	13,681	12,776	2,970	773	69,591
DL Low Inflation	-	14,109	14,104	11,194	6,577	5,577	1,479	0	53,041
DL High Inflation	-	18,500	21,546	16,385	11,725	11,023	3,558	0	82,737
Variances									
Base	-	-	-	-	-	-	-	-	-
Original Project Spendout	14,237	2,963	(277)	(3,892)	(9,079)	(6,206)	(3,167)	(0)	(5,422)
Low Interest	-	-	-	-	-	104	-	(0)	104
High Interest	-	-	-	-	-	(622)	-	(0)	(622)
Slower Delivery	-	-	(5,255)	(2,975)	4,603	5,315	(197)	773	2,262
DL Low Inflation	-	(2,153)	(3,613)	(2,447)	(2,501)	(1,885)	(1,688)	0	(14,288)
DL High Inflation	-	2,237	3,829	2,744	2,647	3,561	391	0	15,409

The top portion of this table shows the amount of additional funds required under each set of assumptions. The bottom portion of the table shows the difference between the "base case" discussed in this paper and each alternative case. In summary, the only assumption that causes a large change in the amount of additional funding is future construction cost escalation. The "base case" in this report is the middle of the cost escalation range recommended by Davis Langdon. If costs escalate at the high or low end of the Davis Langdon range, costs could change by plus or minus $15 million. Each case is described in more detail below.

Base Case

The base case used in this report includes the following key items:

- Costs to build the Neighborhood Stations Program as estimated by Davis Langdon in September 2005 dollars.
- A slightly slower project spend-down rate than assumed in the original Levy program. This spend-down assumes that there is a lag of 90 days between when a particular piece of work is complete and when the City pays for that work. This lag is consistent with the experience of the Capital Programs Division.
- Interest earnings as assumed in the original Levy plan.
- The midpoint of Davis Langdon's recommended range for future cost escalation.

These assumptions result in an estimate of an additional $67 million needed to build the Levy program.

Original Project Spendout

This case shows the effect of the more realistic cash flow presented in the base case, compared to the original Levy plan. The additional inflation cost associated with recognizing the 90 day billing lag is $5.4 million over the course of the Levy program.

Interest Earnings

Interest earnings have little effect on the additional funds that are required to build the Levy program. Interest earnings are small because the cash balances in the Levy program are reduced to a very low level by 2008. Since the balances earning interest are small, interest rates are not expected to have much effect on the additional funding requirements.

Slower Delivery

This case shows the effect on the additional funding requirement of extending the length of the Neighborhood Stations Program by one year. The purpose of this case was to see how important the construction schedule was for total program costs. Adding one year to the Levy program as shown here would increase costs by $2.3 million compared to the base case. This shows the continuing effect of inflation on total Levy costs if the construction schedule is delayed.

The Low and High Ends of the Davis Langdon Cost Escalation Range

Davis Langdon recommended a range of future cost escalation for use in estimating the costs of the Neighborhood Station Program. As described in more detail in Section 5.1, this report assumes the middle of their range of cost escalation. The low end of their cost escalation range would reduce the additional funding requirement by about $14 million compared to the base case. The high end of their range would increase the funding requirement by about $15 million.